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| HMVBV16 | 8159 | 661692 | 1 - 584 | 15 - 598 | AA195746, AW292535, W88512, AI916149, and AA765346. |
| HMVBU89 | 8160 | 786118 | 1 - 440 | 15 - 454 | R18969, and AA491495. |
| HMVBO83 | 8161 | 780366 | 1 - 870 | 15 - 884 | AA028167, AF700675, AA035731, AI051312, AW207134, AI377083, and AI914607. |
| HMVBVJ91 | 8162 | 790025 | 1 - 506 | 15 - 520 | AA973466, and R31969. |
| HMVBF52 | 8163 | 726546 | 1 - 435 | 15 - 449 | W39569, AI638849, AI038503, W44924, AI203113, and AI864025. |
| HMVBR44 | 8164 | 716410 | 1 - 372 | 15 - 386 | AA676928, and W86985. |
| HMVAT54 | 8165 | 888180 | 1 - 695 | 15 - 709 | AI199183, AI799706, AI524226, AI658678, AI619916, H17863, AI67653, AI567123, AI679243, AA993496, AI249113, AA846599, AI290066, AW168928, AA421148, AW001228, AI923054, W89146, AI358091, AA599007, AA969775, AA564967, AI696808, AI805502, C14005, F10215, AI860759, AA058367, AA705404, AA593588, AA581976, AI889279, AA700339, AI884486, AA350860, AI554646, AA447998, AI003564, AI860478, AI804832, AA206837, AW169777, AA887749, AI866503, AW193525, AA576924, T89112, AI277898, AW295179, H61752, AI214409, AA581255, T61678, AI701266, AA715116, AW067953, AA887759, AW188721, AA523949, AA652622, AA527474, T53110, AA402926, AW087438, W35420, AA206937, T49466, AA570117, T73430, AA548627, AI884326, AA448141, AA773851, H29750, and T53109. |
| HMVAT52 | 8166 | 726515 | 1 - 432 | 15 - 446 | H13903. |
| HMVAP56 | 8167 | 732985 | 1 - 501 | 15 - 515 | AA128982, AI149641, AI962865, AI871879, AI346313, AI024604, AA743300, AA293701, AA292933, AI470661, R40595, AW303434, AA833709, and AW005730. |
| HMVAF71 | 8168 | 761400 | 1 - 364 | 15 - 378 | R59687. |
| HMVAF52 | 8169 | 861210 | 1 - 439 | 15 - 453 | R53772. |
| HMVAC67 | 8170 | 751600 | 1 - 797 | 15 - 811 | N72471, T80710, and AC009320. |
| HMSPH53 | 8171 | 861245 | 1 - 406 | 15 - 420 | AA635986. |
| HMSPE04 | 8172 | 926800 | 1 - 788 | 15 - 802 | AI056701, W60140, N36147, AI478510, AA181306, AA187045, C14014, T74524, AA828045, AA127426, AA487209, AI923052, AI356440, H07953, AA298365, AI254779, AA477503, AA757426, AW275498, AW438539, AA809546, AW084445, AI753092, AA657835, AA613630, AI051037, AW302711, AA581525, AA525823, AA879053, AI890324, T96582, AA593828, H51061, AI583106, AI377161, AI345891, AA164891, AA484892, F23338, AA745383, AI355103, AA074143, AA375133, AI311276, AA701080, AC008038, U85195, AE006658, AC005921, AC009247, AP000115, AC006953, AC006057, U91326, AC005231, AC004531, AC003982, AC007371, AC005180, Z94802, AI078621, AL121655, AC004217, D00591, AC006312, AC005399, AC002056, AC004447, AC002550, AC005722, AF002223, AC004962, AC004890, AL135960, AI131016, AL022476, AL109798, Z84466, AC005288, AC004216, AL024498, AC005081, AC000082, AC007228, AC007308, AL133163, AL050332, AL050348, AC004158, AC004817, AC002544, AC006211, AC006032, AF015262, AL022322, AC004491, |

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| HMSPA30 | 8173 | 861265 | 1 - 491 |
| HMSOO28 | 8174 | 861287 | 1 - 460 |
| HMSOJ88 | 8175 | 861292 | 1 - 588 |
| HMSOJ01 | 8176 | 915084 | 1 - 779 |
| HMSOH03 | 8177 | 922828 | 1 - 743 |
| HMSNP06 | 8178 | 934161 | 1 - 424 |
| HMSNG04 | 8179 | 926845 | 1 - 418 |

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| HMSMY10 | 8180 | 963431 | 1 - 418 | 15 - 432 | AA694078, and T85377. |
| HMSMW91 | 8181 | 861336 | 1 - 117 | 15 - 131 | AA677723, and AA376375. |
| HMSMW64 | 8182 | 861338 | 1 - 710 | 15 - 724 | AA489878, AA773463, AA828637, AA613232, AA626040, AI580250, AA640710, AI932599, AA507822, AA559241, AI912401, AI933714, AI457389, AA633798, AA502683, AA515048, AA535216, AA157845, AI500453, AA714282, AW073510, AA581247, AI350211, AA146595, AA832145, AA146578, AA760808, AI022554, AI439910, AA837035, AW302013, AI783911, AI570943, AW090144, AI04471, AA452887, AA410828, AI056177, AA493226, AA501794, AI434695, AA847499, F08248, AA487726, AA564779, AA548040, AI524360, C15363, AI216151, AA779783, N58329, AW193265, AW275719, AL043105, AW021583, AA877992, AL048925, AI347810, AA228778, AW265735, AI471572, AA580808, AI017251, AI554471, N71033, AI244127, AA515133, AA229912, AI471691, N72524, H58354, AA405493, AA651639, AI923052, N95817, AW069769, AA630854, AW338179, AW438643, AA862243, AI002734, NG64587, AI620585, AI561116, H07953, AI270476, AA666295, AI382825, AI004591, AA489806, AA302973, AA084609, AA410788, AI888468, AA749235, AA613627, AA532700, AL079734, AA904275, AA262752, AI674840, AA586661, H85792, AA491814, AA496927, AI580707, AI915293, AI355803, N22037, AA908431, C14967, AI284640, AI252506, AI356440, AI805535, AI805350, AA806796, AI186438, AA303237, AA491955, AA464739, AA569471, W02403, AW272294, AW163763, AA721158, AA658362, AI377413, AA488746, AI049643, AC000003, AC005763, AL035422, AC004967, AC005225, AC005619, AC010205, AC005409, AC004491, AL080243, AP000512, AC004963, AC005399, U91323, AC005808, AC005531, AC006276, AI109801, UT8027, AC004585, AP000501, AC006449, AC010170, AC007546, AC002558, AL035587, AP000513, AC004209, AC007193, AC002319, AC005069, AP000510, AL049869, AC004598, UT73636, Z97054, AL034420, AC003108, AC002350, AL031291, AC006275, AL133448, AC005274, AC004913, AC003030, AC007308, AC005305, Z82206, AC005330, AC004878, AL117354, AC004832, AC005175, AL035398, AC005412, AB014077, AC002369, AL049699, AP000236, AC007151, AC005231, Z98051, AC002425, AC004655, AC004774, AL031311, AL121658, AD000992, AL031848, AC000134, AL031427, AL049576, AL079340, AL008635, AC002996, U622929, AC004228, AL109847, AC005740, AC005919, Z93023, AC007226, AP000173, AC004686, AC004590, AC005914, AC004876, AL034553, AC007993, AL008582, AC004382, AC002492, AL022312, AC007227, AC004149, AC006023, AC005971, AF045555, AF045523, AC004049, AF047825, AC004797, AC007842, AL035685, AC002115, AL022724, AC005200, U91326, AC004099, U63721, AC006121, Y18000, AC005067, AL031685, AL031283, AL034429, AL023575, AL022165, AC006317, AL109984, AL109798, AC005253, AC007030, AL049776, AC004859, AC007565, AC007036, AC007229, AC006285, AP000091, AC002351, AC005736, AL031186, Z95115, Z83826, AC005512, AL079333, AC002395, AC005952, AF107257, AF111169, AC007792, AL035462, AC007435, AL049569, AC005086, AP000289, AC006430, AC007055, AL049540, U85195, AB023049, AF038458, AC004447, |

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| HMSMO59 | 8183 | 861341 | 1 - 595 | 15 - 609 |
| HMSMN71 | 8184 | 927097 | 1 - 635 | 15 - 649 |
| | | | | AA132854, and AA132760. |
| | | | | AI114712, C06057, AA873553, AW439714, AA488984, AA758246, AI379212, AI038707, AI565960, AA313336, AI039448, N70571, N24921, W04529, AA648488, AA576689, AA857397, AA452806, AA016215, AA843067, AA021506, AA834369, AA946685, R74086, R47997, AA887520, Z17365, AA450285, AA037649, AA805193, R53996, AA749374, AA736873, AA865979, AA932132, M85870, AA515596, AA936679, AA716202, AF176069, AF177345, and AF177346. |
| HMSMN26 | 8185 | 861345 | 1 - 489 | 15 - 503 |
| HMSIH07 | 8186 | 953390 | 1 - 168 | 15 - 182 |
| HMSKQ08 | 8187 | 861372 | 1 - 513 | 15 - 527 |
| HMSKH24 | 8188 | 495770 | 1 - 562 | 15 - 576 |
| HMSIX84 | 8189 | 783032 | 1 - 484 | 15 - 498 |
| HMSIW48 | 8190 | 852496 | 1 - 2155 | 15 - 2169 |
| | | | | H10256, T16964, and F07075. |
| HMSIU80 | 8191 | 775416 | 1 - 546 | 15 - 560 |
| HMSIQ40 | 8192 | 954003 | 1 - 380 | 15 - 394 |
| | | | | N21479, AA133872, AI167354, AA129368, N74537, W56424, H99653, AA297666, AW341978, AA365042, AI473995, AL038842, AA503298, AI073373, N57365, AI561060, AA833896, AA833875, AA832444, AA765925, AA482953, AW020150, AI136122, AW070892, AA503119, AC008041, Z82203, AC007285, AC005529, AL049557, AF207550, AC005081, AP000497, AC006312, AC005015, AC004859, AC006441, AL049758, AC005971, AL049709, AF196779, AL080243, AI021707, AC005037, Z84484, AC002477, AL031005, AC005914, AC004929, Z98304, AP000692, AL121603, AC003689, AC002312, U47924, AL021394, AL049843, AC004938, AF109907, AC005519, AL049832, AC003982, AC005527, AC006210, AF111168, AC006101, AC006120, AC006013, Z98946, AP000510, AF111169, Z84469, |

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| HMSI072 | 8193 | 465884 | 1 - 256 |
| HMSI043 | 8194 | 715274 | 1 - 50 |
| | | | 15 - 64 |
| HMSIJM02 | 8195 | 920070 | 1 - 1079 |
| HMSIJL53 | 8196 | 921263 | 1 - 420 |
| HMSJJ22 | 8197 | 495774 | 1 - 569 |
| HMSIJ78 | 8198 | 772846 | 1 - 461 |
| HMSID56 | 8199 | 868168 | 1 - 454 |
| HMSIZ49 | 8200 | 973806 | 1 - 633 |
| | | | 15 - 647 |
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| | D59610, AA305578, AW177733, AW179018, D80378, D51022, C14014, AW178980, AA514188, D51060, D80248, D80522, AW378525, AW352117, AW178911, D80241, D80251, AA514186, D80133, AW178906, AW352163, AW178914, AW367967, AW178774, AW177728, AW378543, AI910186, C75259, AW178983, T48593, AW360834, AW178781, AI905856, AW177723, D80268, D80302, AW378540, D80439, C05695, D80247, D80134, AW352120, D80132, D51097, D58253, D51103, AW177734, AW367950, D80157, D51759, F13647, T11417, AW378533, C14227, D81111, D80064, C06015, D58246, D45260, D59503, AW378542, AW378539, D58101, AW360855, C03092, AA514184, H67854, AA285331, H67866, AA809122, AI525923, Z17814, AI557751, AI535850, T03116, AI525917, D59317, D80258, D80314, D80014, AI557774, AI525920, AI535686, AI535959, AI525227, AI525913, AI525925, D89785, X67155, A67220, D26022, AR018138, A25909, A78862, A84916, A62300, A62298, Y17188, D34614, AJ132110, AB028859, AR008278, Y12724, AF058696, D88547, X82626, A94995, I50126, I50132, A26615, AR052274, I50128, I50133, AR008443, AR016514, AR025207, AR060138, AR066488, A45456, Y09669, A82595, A30438, A43192, A43190, AR038669, AR060385, AB002449, AR066490, AR066487, II8367, D50010, AB012117, A70867, A63261, Y17187, X68127, AR008408, AR062872, A85396, AR066482, AR016691, AR016690, U46128, A44171, AR060133, D13509, A85477, A64136, A68321, D88507, I19525, A86792, X93549, I14842, AR054175, AF123263, AR032065, AJ000347, and AR008382. | |
| HMSIW04 | 8201 | 465835 |
| HMSIU74 | 8202 | 765600 |
| HMSIT32 | 8203 | 699241 |
| HMSIT28 | 8204 | 686663 |
| HMSIP20 | 8205 | 669671 |
| HMSIP02 | 8206 | 920079 |
| HMSIK04 | 8207 | 615218 |
| HMSIB06 | 8208 | 935151 |
| HMSHV11 | 8209 | 967007 |
| HMSHU68 | 8210 | 753038 |
| HMSHU37 | 8211 | 495778 |
| HMSHT11 | 8212 | 967068 |
| HMSHO45 | 8213 | 717808 |
| HMSHJ09 | 8214 | 709471 |
| HMSHI61 | 8215 | 741834 |
| HMSHG08 | 8216 | 959461 |

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| HMSHG06 | 8217 | 935496 | 1 - 412 | 15 - 426 | A1873505, and AA868211. |
| HMSHE81 | 8218 | 784966 | 1 - 418 | 15 - 432 | AL047194, R30808, AA127970, R21308, W49550, H11154, AW059635, AA133838, T96201, AA1346495, AA046957, R52207, AA338045, W20506, T79356, AA344786, AA063363, W37522, R60470, R35905, T31941, AA203250, W68832, AA776637, AA340352, T34581, T35500, AA075388, T34053, AA337298, T99002, R11376, T31786, Z45899, T35531, H93460, F1224, T72052, T65262, U46386, T35164, AA374730, AA228152, N99666, R60632, N44853, W05464, W38978, AA171804, AW372268, T18906, AA094785, AA707543, R32548, R82030, AW372267, T40014, W16937, AW363301, AW392423, AW161265, R31331, AA093953, AA313024, AW352224, AF062483, AF034546, Z98742, AF062482, and AL078596. |
| HMSHE17 | 8219 | 662265 | 1 - 855 | 15 - 869 | T79224, T79733, AI878808, AI878839, AW160501, W27440, D59610, AW361175, T03269, D80241, D80193, D59502, D59467, D58283, D80166, D80195, D59927, D51423, D59619, D80210, D51799, D80391, D80240, D80253, D80043, D80227, D59859, D80212, D80196, D80188, D80022, D80219, D59275, D81030, D57483, D80269, D80038, C14429, D59889, D59787, AW178893, D80366, D50979, D80164, D80024, D80378, D80045, D51250, C14331, C15076, C14389, C14014, AW378352, C75259, D51060, AW177440, AA305409, AW179328, AW178775, AI905856, AI910186, AW352158, D81026, D80134, AW177501, AW178762, AW177511, F13647, D51097, D51022, D58253, D80949, D80522, AW360811, AW176467, C14227, AW352117, AA285331, AA305578, D51079, D81111, D59695, AW375405, AW378540, AW179023, AW377671, AW179332, AW360834, D80251, D52291, AW366296, AW360844, AW179220, AW360817, D80248, AW375406, AW378534, AW377672, AW178905, AA514188, AW177731, AW179024, AW179019, AW352171, AW377676, D80064, AW352170, AW179329, AW178907, AW179020, AA514186, D80133, AW17733, AW178906, AW179018, AW177505, AW360841, AW178909, AW177456, AW178980, AW378528, AW178908, AW178754, C05695, AW367967, D80268, AW179004, D80302, AW178914, AW378525, AW352174, AW178774, AW178911, AW378543, AW352163, AW177728, A1557751, D80014, AW352120, D80132, D80439, D80247, T03116, AW178781, TA8593, AW178983, T11417, AW177723, AW367950, AW378539, D51103, D80157, D51759, A1557774, AW178986, D80258, C06015, D45260, AW177734, AW378533, D80314, AA033512, C03092, AA809122, AW378542, H67854, H67866, AW360855, AI525917, AI535850, Z17814, A1525923, D58246, D59317, C14975, AA514184, D59503, C14973, D59474, A1525920, A1535686, A1525913, D58101, C14046, A1525227, A1535959, C05763, AB020721, X67155, Y17188, A78862, A677220, D89785, A84916, A62300, A62298, AJ132110, D34614, D26022, A25909, D88547, X82626, AR025207, AR018138, AB012117, X68127, AF058696, Y12724, AR008278, A85396, AR066482, A44171, A85477, I19525, A86792, AB028859, X93549, U87250, A94995, AR008443, I50126, I50132, I50128, I50133, Y09669, AF135125, A30438, AR066488, A82595, AR016514, AR060385, AR060138, A45456, AR066487, A26615, AR052274, A43192, A43190, AR038669, AB002449, D88507, AR066490, A70867, D50010, Y17187, I18367, AB033111, AR008408, A63261, |

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| | | | | AR064240, AR016691, AR016690, U46128, AR062872, D13509, A64136, A68321, I14842, AR054175, AR060133, AF123263, U87247, AR032065, AR008277, AR008281, AB023656, UT79457, Z32749, and X93535. |
| HMSHD80 | 8220 | 8822700 | 1 - 1135 | 15 - 1149 AL079812, AI679782, AW069510, AA631363, AA806796, AI802087, AA680243, AI732120, AI791227, AA846568, AI298710, AW079792, AA595782, AI580652, AW103758, AI589230, AA553666, AA453558, AI358343, AW276586, AW022379, AI859251, AI561060, AI499938, AA587604, AI144101, AI198376, AI754170, AI345518, AI370074, AI610159, AA488395, AW265009, AI370094, AI313166, AI439210, AW406162, AW069412, AI246409, AW265385, AW268973, AI567076, AW070892, AI718446, AI345654, AI821271, AA372478, AI754955, AI653636, AI358571, AA584752, AA630352, AW276817, AA302963, AI564454, AI471487, AI334464, AI344812, AI866964, R97780, AI628922, AI956131, AI798265, AA226715, AA542991, AA584145, AA702729, AA523843, AW075511, AA309841, AW020992, AA630925, AA491284, AA984708, AI345418, H71429, F36306, AA679672, AI421841, AI283911, AA563733, AA704393, AI287485, F29989, AI536834, AA133333, AI635274, AW168342, AW088202, AW338500, AI679045, AW327868, AA938105, AW406659, AI986165, AI367975, AA846876, AA059235, AA469451, AI951889, AA630362, AA525190, AI134972, AW407578, AW089322, AA508359, AA133406, AI635609, AA688130, AA654771, AI654247, AI866856, AA214342, AA864426, AL043144, AW407632, AI888518, AI216799, AI951928, AI828463, T08638, AI044858, AW304805, AA653618, AA827981, AI307608, AI301273, AI655279, AA601253, AA143516, AA101689, AL134439, T57119, T09071, AA483223, AA679936, T41242, AI732186, AL119691, AA579075, AA709005, AI246119, AA346458, AW302013, AW079135, AA496508, AA443390, N26226, AL037554, AI046898, AA381163, AI572924, AI334443, AA503475, AA478355, AI475569, AA156538, AI049634, W00807, AA598586, AI471691, AA503283, AA614070, T06783, AA837746, AA650376, AI087133, AI289447, AA531372, AA493708, AA148197, AI982525, AA533725, AA722048, AA457592, AI471464, AA523838, AA502963, AA598425, AI284640, AA569214, AC005288, AL078463, AC005754, AC006312, Z99716, AL035681, AC005822, AF088219, AC004675, AC002091, AC005736, AC006064, AC002395, AC005399, AI049795, AC005231, AC007676, AC005209, AI121653, AL031311, AC004000, AL133448, AL022476, AC002350, U52112, AL080243, AC005924, AB000882, Z96074, AC006277, AC005527, L78810, AC004139, AL031680, AC006251, AC006120, AC004876, AC000353, AC002301, AC006241, AC002543, AI034548, AC005562, AL096791, AC004671, AC002040, AC005011, AC005520, AC005828, AC005215, U62317, AL035659, AL133371, AI021393, AC005694, AC005529, AI008718, AP000131, AP000209, AC000052, AL133246, AC007191, AP000248, Z95114, AP000359, AC005291, AC009516, Z99129, AC002073, AC004858, AC006057, AC005900, AC008079, AC005031, AP000553, AP000506, AC004966, AC004236, AC018633, AL031255, AC010205, AF109907, AC002115, AL023803, AC006948, AF111168, AL109798, AC008040, AC007055, AL034420, AC007226, AC007191, |

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| | | AC004181, AC007298, AC006965, AC004030, AC003101, AC004611, AC004692, AL033525, AC006115, AC006449, AC005375, AL022238, AL117351, AC006130, AC004253, AF042090, AL035072, AC008124, AC007021, AP000555, AC009044, AL021918, AC005488, AC004933, AL049869, AL121655, AL049745, AC008039, AL121603, AP000704, U95742, AC005940, AL109984, AC006479, AC009247, AL136295, AL035079, AL031685, AL049540, AL031178, AC004814, AC005081, AP000008, AC004167, AL031597, AC004560, AC005620, AL024498, Z93020, U80017, AC005102, AC005514, AF196779, AC000085, AL031729, AL021407, AL021392, AL033521, AC006026, AC005531, AC007684, AL031005, AL022320, AL096774, AP000116, AC004263, AC007686, AF124731, AL117694, X87344, AC007308, AC007899, AC006273, AC005664, AL008582, AP000161, AC005261, AC006547, AC005015, AP001054, AC007993, Z98257, AC003688, AC002316, AP000503, AL031846, AL021154, AC002544, AC005829, AF207550, AC004036, AC006160, AC004262, AC007637, AL133353, AF111169, AC004686, AL031848, U91326, AC002425, AC002470, AE000658, U85195, AC006139, Z99127, AL131123, AC005180, AC007263, AL133245, AF064861, AC002365, AC016027, AL031276, AP000558, AC004783, AC007192, AC012384, Z98036, AL031281, AC007386, AL031432, AC004019, AC002347, AC007842, AL022322, AC004228, AC003684, AC006323, Z98946, AL031287, AL023807, AP000140, AC004152, AL031662, AL049713, AC004972, AL035249, AL005341, AL078476, AC007666, AC002349, AL050332, D86992, AC004912, AB023049, AC005341, AL09827, Z98051, AC004531, AC009399, and AL022323. | |
| HMSHB81 | 8221 | 777946 1 - 682 15 - 696 | W07507, N81144, C01673, and AC007298. |
| HMSGX86 | 8222 | 793163 1 - 310 15 - 324 | T87391, and R94130. |
| HMSGF56 | 8223 | 733562 1 - 365 15 - 379 | AA075407, and AA829024. |
| HMSGF54 | 8224 | 730823 1 - 555 15 - 569 | AI628560, AI628570, W52594, H15987, AA314350, AA081556, AA449562, W48833, AA340229, W19356, H16913, AA309056, R18554, AI460069, T80286, AA384328, AA318911, R12855, and AC006033. |
| HMSGF51 | 8225 | 761922 1 - 573 15 - 587 | |
| HMSGD24 | 8226 | 677337 1 - 416 15 - 430 | N62538, and N62572. |
| HMSGC85 | 8227 | 783608 1 - 825 15 - 839 | AA585378, AI526112, AA585325, AA585278, AA585389, AA585430, AA585329, AA283312, AA585439, AA585116, AA585098, AA585356, AI525306, AA585453, AA585420, AA585101, AA585327, AW366296, T26367, T48593, AI541402, D78224, D57491, T18597, C15406, R29657, AA585198, Z32887, D59751, C15069, Z32822, D53161, AA585155, AI526205, D54850, R45895, D61185, AA585351, AI526169, Z33559, D51433, AI557718, AI525316, AI541356, AI557262, AI541365, AI557864, D59458, AI526078, AI526146, Z36724, AI535660, D51413, AI525500, D50992, AI526016, AI526158, AI526140, AI546855, AI557740, AI535639, Z228355, AA486970, AI557809, AI557731, D54897, AI541535, AI546831, AI421391, AI541013, AI541492, AI541205, AI525556, AI557533, AI525168, AI557727, AI540903, AI546971, AI526187, AI536138, |

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| | | | | AI526184, AI526176, AI541517, AI557084, AI526024, AI557317, R28965, AI541516, AI557852, AI541515, AI541034, AI547250, AI557758, AI526191, AI557408, AR017826, AR031358, AR031365, AJ131952, AF135243, A85395, A85476, X82786, AB005666, AR037157, A25909, AR062871, AR008429, AR060134, A70872, X55499, A70869, A70899, A94995, X93517, AJ007320, Z79435, AR038669, A84774, A44281, I50122, U87250, AR068047, A84773, M60510, A84772, A84776, A84775, AR060137, AR060142, A91750, AF134119, AR029417, A83076, X84816, Z79475, A91667, A91666, U79666, A30438, AR028672, AR038855, AR050070, AB005559, A62298, A82595, A82593, U89315, AR060057, AJ009991, Y09668, I32384, AJ012010, AF213384, AF006072, U94592, L36913, U85196, AE000661, Z30183, Z31700, A44216, AL035462, and AC006515. |
| HMSFY63 | 8228 | 745230 | 1 - 448 | 15 - 462 |
| HMSFX73 | 8229 | 888326 | 1 - 170 | 15 - 184 |
| HMSFS08 | 8230 | 959773 | 1 - 408 | 15 - 422 |
| HMSFR23 | 8231 | 919890 | 1 - 1974 | 15 - 1988 |
| | | | | AA040275, AW069227, AA610509, AA191418, AW271917, AW341978, AI537020, AI885572, AW299781, AI753113, AA635368, AI623764, AL048607, AA180775, AW157492, H80203, AI634187, AI625604, AI040051, AI270524, AI251576, AW089950, AW338370, AA225406, AW270256, AW068316, AI051037, AL040054, AI783911, AI559645, AI583466, AT20732, AI205181, AI590458, AW274191, AI306232, AI768952, AI270476, AI061313, AA601986, AA533176, AA749235, AA525253, AI457313, AI869786, AA634786, AI569510, AI635028, AW272294, AI634691, AA777986, AW419389, AA582554, AI431513, AI590499, AA657835, AW188662, AW157005, H53168, AC005694, AL034420, Z85987, AL031005, AC005527, AC005682, AC005940, AL050318, AL096791, AC006501, AC005736, Y18000, AC002310, AP000503, AC006449, AC002558, AC005972, AC020259, AC003029, AC008984, Z97054, AC009516, AC006468, AC005778, AL035683, AC007684, AC005500, AC002314, AL049694, AP000088, AL0313II, AC004019, AC006285, AP00512, AL133448, AC002316, AL022316, AL121653, AL049553, AP000692, AL050332, AC005529, AP0000359, AP000152, AC004253, AC007731, U47924, AC005520, AC005399, AL021397, AC005755, AC005041, AC004531, AL035413, AC003982, AC002073, AC005180, AC007919, AP000248, AC004112, AC000025, AP000133, AP000211, AL035079, AC007999, AC005231, AC0055231, AC005874, AF134471, AC000052, AC002470, U80017, AD000092, AC005212, AC007055, AC007993, AL096701, AC009247, Z98036, AL133355, AC005899, AC008012, AF207550, AC006130, AC006017, AC005722, AL050312, AL034555, AF200465, AL031685, AC006211, AC005482, AC002115, AP000555, AF134726, AC007387, AB023049, AC007308, AC004477, AC006480, AC004985, AC004520, AC003041, AL080243, AC002312, AC005102, AC005049, AC007371, AC004913, AP000553, Z68870, AC005255, AC002350, AC002301, AC002543, AP000502, AC004865, AC004466, AC007845, AL117253, AC005225, AL022721, AC006512, AC004526, Z86090, AC004832, |

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| | | AA683091, AA350406, AI357551, AA215585, AA077619, AA158549, T07346, AI678867, AA047849, T10218, N47855, AW327852, AA158550, AW188487, N52323, N33851, AW070476, AA364488, F13749, AL135643, AA329321, AI289050, AI751162, AW162288, AI284092, AI611440, AI612141, AA483141, AI696793, AA5116058, AA654627, T11542, AA730336, AA779018, AA515440, AA572975, AA321595, AI565582, AA457482, AA650244, AW439839, AA975915, AA456422, AL031650, AL049713, U73331, AP00345, AL009179, AP000344, AL133353, AC006958, AP00245, AL022578, Z93020, AC004653, AL031651, AC004548, AP001054, AC006121, AC006948, AC005969, AC003080, D84394, AC004675, AF088219, AC003692, AC005582, AC006539, AL021939, AC004453, AC004234, AC004765, AC005703, AL031346, Z83839, Z98949, AP000319, AC002476, AL135744, L35930, AL035667, AC003043, AC005358, U92894, AC004258, AC006047, AC005330, AC004851, AP000509, Z94056, AL023803, L44140, AC007292, AF031078, AF030876, AL049871, AL020993, AC004386, AL096701, AC004656, AL031594, AC000029, AP000556, AL049744, AC004882, AC005529, AC006000, AC006511, AP000555, AL049849, AL049641, AL022326, AC006019, Z99570, AL021578, AP000120, AP000167, AP000052, AC007388, AC005300, U07563, AC007151, AL049793, AC003072, AP000068, AC002483, AF001548, AC007736, AC009178, AC007917, U47924, Z83843, AC004913, AC005031, AL008726, AF037338, U80017, Z82245, AB014077, AC005525, AC005788, AC004209, AC006139, Z73420, AC006130, AC005365, AP000514, AL031676, AC005899, AC003003, AL035419, D00591, AC002559, AL050318, AL034551, Z83840, AC003957, Z82170, AC005550, AC005399, AC007387, AP000301, AF039906, Z69710, UT3638, AC005253, AC004149, AP000114, AP000045, AL031175, AC003029, Z988884, AC005736, AL096791, AC002463, AC005944, AC006930, AC005578, AC003065, AC004159, AC005033, AC004562, AL035460, AB003151, AP000688, AC006312, AC006449, AC006530, AF123462, AL021394, AC005542, AL133243, AL035423, AC004887, and AL023694. | |
| HMSDB08 | 8245 | 960260 | 1 - 611 |
| HMSDA81 | 8246 | 778469 | 1 - 362 |
| HMSCY01 | 8247 | 921768 | 1 - 387 |
| HMSCW45 | 8248 | 723483 | 1 - 274 |
| HMSCT69 | 8249 | 855855 | 1 - 462 |
| HMSCP73 | 8250 | 764703 | 1 - 354 |
| HMSCO63 | 8251 | 855863 | 1 - 431 |
| HMSCD07 | 8252 | 954243 | 1 - 314 |
| HMSBZ67 | 8253 | 973737 | 1 - 473 |
| HMSBZ13 | 8254 | 855866 | 1 - 436 |
| HMSBY67 | 8255 | 752145 | 1 - 464 |
| HMSBW54 | 8256 | 880721 | 1 - 571 |

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|---------|------|--------|----------|-----------|--|
| HMSBU24 | 8257 | 678709 | 1 - 757 | 15 - 771 | T47576, T47577, and AFI46689. |
| HMSB095 | 8258 | 796724 | 1 - 363 | 15 - 377 | AA010247. |
| HMSBM92 | 8259 | 792970 | 1 - 127 | 15 - 141 | - |
| HMSBI82 | 8260 | 780229 | 1 - 176 | 15 - 190 | |
| HMSBI56 | 8261 | 733772 | 1 - 71 | 15 - 85 | AI122007. |
| HMSBH85 | 8262 | 784576 | 1 - 448 | 15 - 462 | H69907. |
| HMSBH08 | 8263 | 958802 | 1 - 1311 | 15 - 1325 | AW378732, AW089016, AA595661, AI123488, AL044701, AA493808, AI828721, AA507623, AA935827, R72363, AI355246, AW152439, AA584360, AW057760, AA654705, AA676592, AI453476, AI791659, AI733523, H71678, AI567676, AA493245, AI521525, AA425283, AA135761, AA640305, AA526643, AA829565, AI984168, N32081, AI434686, N29829, AI609984, R22196, AI350189, W04238, AA720582, AI159799, AI345566, AI697235, AW020150, AI860423, AI915081, AI242614, N27362, AA128511, AI434103, AA526542, AI697239, AI610012, AI583532, AA487209, AI697242, AI609974, AA631915, AI342863, AI086603, AA482682, AA577706, N23099, AA635135, N94115, AA640104, AI798493, N32080, AA747757, AA584183, AI280535, AA303002, AA807704, AI537368, AA015948, AI791426, AI732473, AA525112, AI521042, N32094, AA297776, AW272606, AI682899, AI754064, AI679730, AW072963, AA832145, AA054055, AA613761, AA719564, AW380335, AA564591, D34614, AC007546, AP006688, AL008710, AL035413, AL109952, AI049631, AC007388, AC003108, AC000353, AC005305, AC005921, AC002430, AC007565, AC006011, AL049636, AC007384, AC003002, AC005516, Z84474, AI133246, AL031229, AC006121, AC004008, AC003962, Z93024, AC005003, AC005088, AC005619, AF109907, AL0222326, AL022237, AL049872, AC007283, AC005839, Z93241, AC002544, AL031666, AC007421, AL031602, Z95116, Z95114, AF141309, AC004663, AC002310, AC005399, U78027, AL022322, AC009247, AI049743, AC007227, AC004662, AP001054, AC007207, AL035422, AF107045, D28126, AL022398, AL035462, AL049869, AL034451, AL031297, AC005593, AC007151, AC002128, AL031681, AC005328, AC004408, AC004150, AC004699, AL031311, Z86090, AF024533, Z84469, AC005231, AC003043, AL022721, AL133163, AL133241, AP000049, AC003667, AL035684, AC000025, AC005015, AC004477, AC004099, AF060568, AC002316, I34294, Z92546, AP000311, AC005049, AC006505, AL121578, AC003112, AC007559, AC005527, AC001234, Z97054, AP000116, AC002549, AC004755, AC005899, AP000555, AC004009, AF196972, AL031782, AC006013, M63796, AC005082, Z93023, AC004887, AC004920, AC005913, Z73359, AL096701, U93305, AP000497, AC004491, AL034379, AF196779, AF207550, AC005255, AC002538, AL049757, AC004448, AC004973, AC007899, AC007536, AP000359, AP000689, AC006111, AP000353, AC006017, Z83844, AC002407, AC002039, AC006449, AC004814, AC005377, AC004079, AL117258, U07561, Z97353, AF184110, AC005971, AC007386, AL109627, AL096767, AC005754, AC005624, AC004893, AC005529, AP000233, AF134726, AC007057, AP000289, AP000147, AC006101, AC006236, AC005369, AP000350, AP000042, |

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| | | | | AP000110, AC006277, AC006125, AC004230, AC006409, AL022311, AF047825, Z98036, AC005663, AL109980, AD000092, AC002300, AC004890, AC005180, AC004805, AL021878, AC002312, AC004882, AC006162, AL109963, AL121655, AC004587, AL031286, AC006120, Z95113, Z98304, AC004685, AC005952, AC002357, AC008119, U63630, AL021393, AC005696, AL020993, AC005484, AC008018, K00061, AC002106, AC002410, AL080243, AC006115, AC005031, AC005484, AC008018, K00061, AC002106, AC002410, AL080243, AC006115, AC005031, AL049793, AL035659, U66062, AL031121, AF217403, AL132777, AC007934, AC002481, AL031777, AC002476, AC002492, AL050321, AL0108635, AC007308, AB017602, AC006077, AP000085, AL109628, AL078581, AC007199, AC000094, AF130249, AC000085, AL031118, AL035694, Z99716, AC005081, AL022316, AC007051, and AC005280. | |
| HMSBH07 | 8264 | 954457 | 1 - 448 | 15 - 462 | AI225156, Z80896, and U51560. |
| HMSBF92 | 8265 | 582654 | 1 - 905 | 15 - 919 | Z99774, AC007073, AP001051, AC007016, AP000014, AL009179, AL096772, AC002375, AC005347, AC006060, AC005279, AC008123, AL008710, AP000155, AL109620, AC005736, AC007240, Z82250, AC005905, and AC006167. |
| HMSBC31 | 8266 | 960021 | 1 - 552 | 15 - 566 | R08621, R09445, T83341, R12764, AI868387, AW168691, R52828, R66453, AI572495, R26443, AI479182, AI745312, AW272841, AI376897, AI559339, AI1818827, AI128920, AI818867, AA056017, AW243942, H98699, AI801490, AA599935, AI241017, AW023649, AI879926, AW264809, AI432465, AI022932, AI042229, AW294405, AI638167, AA563714, W46846, AI619816, AI453457, AI215121, AI373123, N63964, AI245268, AA972323, AA709398, AI122927, AI336525, AI273714, AA599488, AI862846, AI128566, AI950246, AW236025, D58140, A1951485, AI742100, AI913610, AI873481, AI479476, H47624, AI365294, AI610258, AI868878, AW192014, AI094370, AW295145, AA778934, AW303589, AI247403, AA947308, T90383, AI457642, R62344, AI346810, A864840, N46424, AI655638, AW082317, AW305262, AW207683, AW084022, AI274053, AA490456, AI973108, W46841, Z40817, N20960, R91085, AW129403, H58229, N52900, AA034024, A1916541, C21345, AW152560, AA135710, AI913607, AA885112, C16453, R56284, and AI342372. |
| HMSBA43 | 8267 | 715699 | 1 - 364 | 15 - 378 | H63639, and AA805570. |
| HMSAV84 | 8268 | 781872 | 1 - 405 | 15 - 419 | H62879. |
| HMSAV65 | 8269 | 747792 | 1 - 393 | 15 - 407 | AA524821, AA180370, AA083046, AA224525, AA181758, AA837677, AA526787, AA935988, AA493695, F36273, AI872020, AA757797, AA533303, AA580808, AA846953, AI584186, AI042213, AA653375, AI859742, AA477122, AI933534, AA551503, AI583283, AI243584, AA482806, AA632600, AA621596, AA782304, AI732547, AW075511, AW193265, F18619, AW168618, AA584167, C17734, AA992337, AI270117, AW438643, AI345654, AA834792, AA583898, AA847499, AA501821, AI908381, AA581903, AI350211, AI6779782, AA483223, AA490183, AA715991, AA581076, AI049634, AA720702, AA935100, D58349, AI022329, AC009516, AC005089, AC006211, AC005412, AP000056, AP000171, AI132712, AL080243, AC005484, AP000330, AP000043, AC008115, AC004686, Z93930, AC005081, AC004491, |

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| | | AC006014, AL096701, AL049569, AL023494, AP000553, AC003109, AC005736, AL034549, AC005231, AC006001, AC005488, AC005280, AC005756, AC002365, AC004477, AP000344, AC004263, AL021878, AC006312, AC006032, AC004799, AL049759, AC004895, AL023575, AC004167, AL008725, AP000111, AL031846, AC004935, AC005335, AC005829, AF139813, AC002470, AL133246, AC008372, AF109907, AC016025, AL031685, AC000353, AL117330, AC005071, AL031295, AC006449, AL021546, AL020995, AC005899, AC005783, AL022721, AC005914, Z98950, AP000065, AC004771, AL009179, AC004383, AC005520, AC005618, AC004858, AF047825, AC005031, AC005288, AL035249, AC005837, AL049779, AF091512, AD000092, AC004876, Z99716, AC006111, AC007690, AC008040, AC006050, AL121603, AC004953, AC005971, AL031733, AC006371, AL049766, AL035681, AC006241, AL133245, AC005088, AL031597, AC005746, AP000124, AL022722, AP000359, AL031276, AJ003147, AC005839, AL049709, AL009181, U80017, AC002565, AP000090, AC007899, AL022237, AL079340, AL049829, Z97056, AC003108, AC004671, AC002310, AF001549, AL135744, AC005529, AC007226, AC005069, AF196969, AL009172, AC004019, AC007151, AC007182, AC002404, AC005261, AL078463, AC006126, AL035460, AF196970, AL135960, AJ131016, AC007666, Z49236, AL050341, AC003030, AC007030, AC005332, AC006117, AP000556, AC004955, AC004975, AC006064, AP000347, AL035089, AC000070, AC002316, AC005037, AL022302, AC002312, AC005324, AC002476, AC005049, AC005225, AC007227, AC004638, AC004605, AC005632, AL031003, Z86061, AC002564, AC004970, AP000557, AC006116, AL022320, AC005578, AC005180, AC006317, AC008018, Z98941, AC007537, AL020997, AP000513, AP000552, AP000459, AL049694, AL031407, AC004149, AF024533, AC004253, AL031680, AL031662, AC006965, AC004841, AL096791, AL049776, AC005330, AJ102170, AC010206, U91323, AF003626, AC004776, AC005015, AL035494, AC022517, AC005940, AC005565, AC006017, AC007376, AC005696, AC004783, AC000052, AC007919, AC002429, AC006480, AF055066, AC005920, Z86062, AC004231, AF031078, Z93017, AC006539, AC004797, AL022316, Z82244, AC002133, AC007934, AC000118, AC006441, AJ239322, AC005291, AC008009, AF217403, AL117344, AC007326, and AF196779. | |
| HMSAT76 | 8270 | 842065 | 1 - 623 |
| HMSAQ95 | 8271 | 796728 | 1 - 381 |
| HMSAQ58 | 8272 | 738495 | 1 - 346 |
| HMSAP36 | 8273 | 518062 | 1 - 211 |
| HMSAO42 | 8274 | 714316 | 1 - 174 |
| HMSAH80 | 8275 | 781640 | 1 - 365 |
| HMQDY06 | 8276 | 936015 | 1 - 450 |
| HMQDDQ42 | 8277 | 457221 | 1 - 344 |
| HMQDL40 | 8278 | 711421 | 1 - 242 |
| HMQCZ36 | 8279 | 708066 | 1 - 372 |

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| HMQCZ18 | 8280 | 574068 | 1 - 459 | 15 - 473 | R72937, AI003337, AP001056, and AP001055. |
| HMQCX42 | 8281 | 712966 | 1 - 431 | 15 - 445 | R97476, T83110, T82131, and AB018341. |
| HMQCV29 | 8282 | 974683 | 1 - 486 | 15 - 500 | AW089880, R84393, AA976621, W73367, AI478491, AI081094, H43299, AW294792, AA378963, AW292636, AA378964, W69666, H66133, AI671768, AA701250, AA702739, AI985183, AW207720, AW292633, AW271763, AA256004, T47922, W45654, AA455850, AA704633, and AC020663. |
| HMQCN17 | 8283 | 385544 | 1 - 384 | 15 - 398 | AA190721, AA974701, and AA149317. |
| HMQCM46 | 8284 | 719201 | 1 - 123 | 15 - 137 | AI219699. |
| HMQCM41 | 8285 | 711586 | 1 - 135 | 15 - 149 | |
| HMQCM05 | 8286 | 932363 | 1 - 180 | 15 - 194 | |
| HMQCH69 | 8287 | 754188 | 1 - 419 | 15 - 433 | NA47102, AW135582, AI700192, AI871529, and AW081758. |
| HMQCH54 | 8288 | 728851 | 1 - 265 | 15 - 279 | AA026069, and AA026070. |
| HMQCB03 | 8289 | 963370 | 1 - 305 | 15 - 319 | AW072495, AI560951, AI743233, AI583496, AI583807, AI380351, AA928555, AI500421, C17500, AI339070, AI884995, AI197975, AI344492, AI884792, AA877126, AA233986, AI245590, AA442443, W57931, AI079317, AA143237, AA721704, AA304268, AI027135, AI252344, AI335498, AI312160, AI334907, AI307561, AI252601, AI345291, AI312354, AI344924, AI312953, AW074978, AI590450, AW075157, AW301942, AI312975, AW301956, AI583821, AI348908, AW302779, AI370101, F26488, AI340917, AI611858, AI318626, AI802845, AI053448, AI376475, AI344868, AI308315, AA570158, AI311886, AW268184, AI541347, AI612046, AI307429, AI250091, AI370083, AI308517, AI308028, AI309430, AI611379, AI307014, AW301798, AI250220, AI417297, AA862400, AA143295, AI749104, AI879450, AI562876, AA933040, AI609988, AI582677, AI541281, AA282746, H46464, AA340388, AA327360, F36474, and AL133448. |
| HMQBN40 | 8290 | 779856 | 1 - 459 | 15 - 473 | AA258747, AI347356, AW005871, AA639645, AI391658, AI379681, AI928095, AI819881, AA136079, AA557386, and Z79996. |
| HMPTA56 | 8291 | 921233 | 1 - 356 | 15 - 370 | AA359995, AA993757, AC006226, and Z61386. |
| HMPTA28 | 8292 | 685099 | 1 - 290 | 15 - 304 | AC006287. |
| HMPSC38 | 8293 | 709222 | 1 - 331 | 15 - 345 | RA08653. |
| HMPBB84 | 8294 | 781863 | 1 - 731 | 15 - 745 | AA362237, and AA362238. |
| HMOAD90 | 8295 | 600400 | 1 - 339 | 15 - 353 | |
| HMOAD60 | 8296 | 855919 | 1 - 228 | 15 - 242 | |
| HMMCL96 | 8297 | 796276 | 1 - 468 | 15 - 482 | AW023589, and R00787. |
| HMMC101 | 8298 | 913715 | 1 - 329 | 15 - 343 | AA835501. |
| HMMCH69 | 8299 | 754902 | 1 - 313 | 15 - 327 | T52346. |
| HMMCH09 | 8300 | 625366 | 1 - 586 | 15 - 600 | W01465, and AA259146. |
| HMMCD83 | 8301 | 875272 | 1 - 438 | 15 - 452 | AW168912, T57077, T57149, AA570710, W04964, and AI743980. |

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| HMMCD23 | 8302 | 675720 | 1 - 499 | 15 - 513 | R27937, and Z97054. |
| HMMCA11 | 8303 | 9666677 | 1 - 448 | 15 - 462 | AA677566. |
| HMMCA08 | 8304 | 958980 | 1 - 424 | 15 - 438 | AA610438, AI571512, AW074207, AA652057, AA649642, N23649, AA125788, AA548702, AA733208, AA555260, T40617, AA095511, AW088058, AI54289, AA557879, N23874, AI246340, AI469166, AW069427, N73083, AA317656, AI038990, F03525, AW406447, N26061, AI281903, AA687182, AA576336, AA812139, AI914151, AI801482, AA338522, AA301813, AA181494, H37777, T07324, AA552856, W25284, AA653327, AA594725, AW339568, AI754658, AI119123, AI744827, AA832181, AA074458, AL134703, F34999, N70337, H63991, AA526193, AA629415, AW408063, AA629407, N53152, T06652, AA369477, AA317170, AL138242, AI708005, AA613345, AF087510, AF066501, AL031587, AL031133, AC005694, Y18000, AC005529, AL132712, AF007544, AL121577, U86136, AL109611, AC005375, AC016025, AC016026, AC006080, U55182, AL035685, AC005210, AL031228, AC006057, AC006505, AC002316, AC005994, AL049690, AC007227, AC005324, AC007450, AB016897, AL022238, Z82976, AL080242, AL023575, AL008583, AC004820, AC007226, AC004526, AP000073, AC005569, AC005364, AC004232, AC020663, AC002115, AC004408, U51559, U63313, AP000432, AL121782, Z95126, AL136504, AC006536, AC009498, U41384, AC004944, AL121580, AC005030, AL049839, AC005175, AL050343, AF003530, AP000153, AP000012, AL031577, AC008071, AL049636, AC004492, Z15025, Y14768, AP000505, AL096712, AF129756, AC005940, Z98946, AC005808, U95740, AC005520, AP000350, AC007461, AL049779, AL049776, AC004976, AC003983, AC003102, AC006323, AC005726, Z68344, AC005785, AF091512, AC003103, AP000692, AL022578, AC002080, AC005695, AC003684, Z99716, AC005500, AC005872, AL096734, AF154840, AL096765, Z84723, Z46773, AC005346, Z68756, AC005262, AL049741, AC004752, U07563, AL022220, AL096776, AC005998, AL022163, AC006486, AC003007, L78833, AC002310, AL109984, AC006543, and AL078474. |
| HMMBZ18 | 8305 | 666192 | 1 - 746 | 15 - 760 | AA701580, AA701569, AA828646, AA776372, T87907, AA811226, R07726, R93731, AA761770, AI240497, T88001, R06363, R06362, R08543, and AA810943. |
| HMMBZ05 | 8306 | 566870 | 1 - 654 | 15 - 668 | AA441997, AI885572, AW080811, AW166611, AI754658, AC005803, AC007436, AC007221, AC004905, AC004815, AC005225, AC006512, AC004616, AC004963, AF111169, AC002425, X75335, X54175, AC006948, X54181, AF196779, AC005784, X54178, AC006023, AC005237, AC005067, M87919, AF207550, AL035072, AC004417, AC004858, AF109907, AC005988, Z97630, AC003688, AC007360, AC007546, AC005971, AC007899, AC002551, AC005521, AC007237, AC007731, AC007263, AC005500, AJ003147, Z68162, AC006160, AC007786, AC006255, AC002553, AF015148, AC005755, AC005288, AC005284, AL121653, AC006011, AC005531, AC009516, AL132712, AC006480, AL049780, AL034548, AL049709, AL022316, AL136504, AC002558, AL009181, AL049839, AC002544, AC005399, AL133448, AL022302, AF117829, AC004253, AC006501, AC006312, AL133353, AL031311, AL022329, AC005759, AC004643, AC004019, AC003664, Z85986, AC005786, AC006079, AC000052, |

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| | | | | AC004263, AC004033, U52111, AL109627, AC006211, AC004034, AL049759, AL080243, and AC005306. |
| HMMBX01 | 8307 | 916067 | 1 - 406 | 15 - 420 |
| HMMBV08 | 8308 | 958987 | 1 - 450 | 15 - 464 |
| HMMBU13 | 8309 | 597147 | 1 - 444 | 15 - 458 |
| HMMBT64 | 8310 | 746399 | 1 - 408 | 15 - 422 |
| HMMBT30 | 8311 | 841959 | 1 - 607 | 15 - 621 |
| HMMBT03 | 8312 | 855930 | 1 - 631 | 15 - 645 |
| | | | | AA0420476, AI376552, AI935005, AW090719, and AC006504. AI939575, and AI362923. H65100, AC004686, AF201333, and AF081568. T96528, and AA543014. AA280370, R58990, H71497, AC005050, and AL031985. AI754567, AI583466, AI061313, AL079734, AI436433, AI962030, AI366993, F23264, AW237905, AA904211, AI755214, AI923052, T74524, AI754105, AI754653, AA420546, AA864603, AI254959, AI612142, AI281730, AA515728, AW103406, AI354423, AI306232, AA829036, AA535216, AI583252, AI610941, AW275432, AA469327, AW274191, AA225406, AI926102, AI923451, AI635028, AI801505, AA456924, AI469599, AW243793, AA595661, AA714011, AW151541, AI521525, AI279417, AW271904, AW020088, AI798449, AI251576, AW272294, H07953, AA825827, AW023111, AL041375, AI984168, AA483606, T496333, AI291439, AI290405, AL138182, AI537995, AI536858, AI130709, AI249688, T05118, AA570740, AW069227, AI476049, AA524616, AA683069, AI917132, AI674840, AA651639, AI380617, AA608520, AI491765, AW272640, AI814682, AA284247, AI923458, AW328000, AI590485, AW089016, AA937809, N77915, AI753113, H05940, AC005006, Z98036, AC005004, AC004757, AF196779, AC004386, Y14768, U85195, AC005962, AE000658, AC007298, AP000505, AF165926, AL021154, AC006333, AC006026, AC004466, AP000114, AP000046, AC006312, AL049843, AC007371, AC004106, Z85986, AL023553, AC004991, AC005261, AC002425, AL031659, AC006942, AC002301, AC002418, Z95331, AC003669, AC004922, AL031680, AC009247, AC005821, AC002316, AL109839, AL035407, AL034548, AL049839, AC005736, AC005039, AL031737, AC005899, AL035587, U966229, AF130343, AC007707, AL034343, AC005378, AC004148, AC000003, AC007731, AC005632, AC005500, AC005280, AC007227, Z84487, AC005274, AL049643, AC000353, AL031283, AP00694, AC007993, AL050318, AC005837, Z98751, AF152363, AC004216, Z98256, AC007686, AL022098, AF031078, AC005220, AL024498, AF030876, AL023879, AL121655, AC004972, AL031848, AC005332, AC002300, AC004000, AL049872, AC007546, AC004033, AP000510, AL049780, Z93017, AC004821, AC004988, AC004458, AC005544, AC006552, AC009516, AC005952, AC004819, AL079340, AL024498, AC003080, AC005598, AC000118, AL117329, AL049856, AC006211, AL022315, AF134726, AC002369, AC005041, AC002426, AL050307, AL078581, AI133163, AC006057, AI121603, AC004796, AC005887, AC007052, AL049712, AL049636, AF053356, AC006354, AC004408, AC004181, AL050348, AC005158, AB023048, AL022724, AC004686, AP000697, AC005095, AC004999, Z93016, AC005670, AJ011930, AC008072, AL009172, AL022238, AL035659, AL121652, AL080317, AC005535, AC003982, AL117258, AC008115, AL024508, AP000302, AC005844, AF001549, AC005484, AC006017, AC004491, |

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| | | AL121840, U80017, AC005971, AC005089, Z84469, AC007617, AC005529, AC006362, AL021807, AL079295, AC005823, AC003041, AC005520, AC005479, AC005399, AF067844, AC005225, AC007308, AC007388, AC004914, AC003663, AL049823, AC004605, AP000210, AP000132, AC000025, AC005562, AC007690, AL035405, AC006101, AF031076, Z98044, AC002553, AC002351, AC004533, AC003109, AC003029, AC002326, AL031280, AL022401, AL021453, AC006530, AC005702, AB003151, AC004020, Z99127, AP000248, AC005011, AL009031, AL021579, AL049569, AL122020, AC003962, Z93930, AL050312, AF196969, AC006084, AP000555, AC005082, AC005057, AP000152, AL049690, AC006581, AL033504, AL133448, AC012384, AL033397, AC004996, Z97630, AC002432, AC006511, AC005874, AF134471, AC003037, AF095901, AL117337, AC002352, AL031594, AC004928, AC004531, AF030453, AB020868, AC007774, AL008710, AC006062, AP000240, AP000042, AL121838, AC004526, AC005527, AL122126, AL136295, AF017104, AC002312, and AC002404. | |
| HMMBQ08 | 8313 | 958988 | 1 - 343 |
| HMMBQ09 | 8314 | 722753 | 1 - 439 |
| HMMBQ28 | 8315 | 686318 | 1 - 344 |
| HMMBN76 | 8316 | 769890 | 1 - 482 |
| HMMBN71 | 8317 | 973436 | 1 - 458 |
| HMMBQ08 | 8313 | 958988 | 15 - 357 |
| HMMBQ09 | 8314 | 722753 | 15 - 453 |
| HMMBQ28 | 8315 | 686318 | 15 - 358 |
| HMMBN76 | 8316 | 769890 | 15 - 496 |
| HMMBN71 | 8317 | 973436 | 15 - 472 |
| HMMBQ08 | 8313 | 958988 | N24829. |
| HMMBQ09 | 8314 | 722753 | R56828. |
| HMMBQ28 | 8315 | 686318 | V88435, R98924, and T99820. |
| HMMBN76 | 8316 | 769890 | W88435, R98924, and T80763. |
| HMMBN71 | 8317 | 973436 | Z99396, AL119484, AW392670, AL119439, AW372827, AL119391, AL134530, AL134519, AL119319, AW384394, AL119522, U46347, AL036418, AL038837, AW363220, AL119497, AL119457, U46350, AL119324, AL037051, AL036725, AA631969, AL119363, AL119443, AL119483, U46351, AL119355, U46349, U46349, U46349, U46349, AL119341, AL119335, AL119396, AL038509, AL036858, AL119444, AL119418, AL039074, AL119496, AL036924, AL037205, AL134528, AL043003, AL042614, AL119401, U46346, AL042544, AL134525, AL037639, AL134524, AL039564, AL039085, AL037094, AL039156, AL134518, AL037082, AL042984, AL042965, AL042975, AL039108, AL039109, AL037526, AL039128, AL119399, AL036196, U46345, AL142137, AL134538, AL043019, AL042542, AL142132, AL042551, AL036767, AL037085, AL038447, AL043029, AL036190, AL042450, AL037077, AL036268, AL038520, AL038851, AL036238, AL037615, AL119464, AL036774, AL037178, AL036998, AL036733, AL036719, AL037027, AL036765, AL036679, AL036191, AL036158, AR066494, AR060234, A81671, AR023813, AR064707, AR069079, AB026436, AR043113, and AR054110. |
| HMMBN54 | 8318 | 729352 | 1 - 384 |
| HMMBM8 | 8319 | 781010 | 1 - 228 |
| ³ | | | 15 - 398 |
| HMMBL55 | 8320 | 731523 | 15 - 452 |
| HMMBH64 | 8321 | 746402 | 15 - 351 |
| HMMBF86 | 8322 | 812597 | 15 - 170 |
| HMMBF72 | 8323 | 761389 | 15 - 304 |
| | | | 15 - 318 |
| | | | H73690, and AF152365. |
| | | | T95450, W03267, and AC004112. |
| | | | R36479, and A1091460. |
| | | | T78390, and AL031714. |
| | | | H56329, AA852740, AA331858, AA314410, AA375100, AA356819, AA331462, AA295347, AA232345, AA242864, AA081834, AL037869, AL037847, U91327, and AF026166. |
| | | | T91720, and AC007016. |

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| HMMBF41 | 8324 | 711731 | 1 - 492 | 15 - 506 | T40112. |
| HMMAV44 | 8325 | 716396 | 1 - 628 | 15 - 642 | T86763, T86671, F05025, F05024, AL109758, AC005089, AC004770, AF053356, AP000555, AC002400, AL032821, AC002300, AC003010, AC004938, AC002302, U89335, AP000512, AC005067, AC005412, AC008038, AF001550, AC006480, and AC005529. |
| HMMAT23 | 8326 | 973437 | 1 - 572 | 15 - 586 | AL035447. |
| HMMAT08 | 8327 | 959005 | 1 - 519 | 15 - 533 | T64273. |
| HMMAS73 | 8328 | 764280 | 1 - 583 | 15 - 597 | NA47781, AI732466, AA133879, AI820506, T70099, AI821351, T70032, N56894, and AC006599. |
| HMMAR20 | 8329 | 669523 | 1 - 648 | 15 - 662 | AA968696, AI017739, T71248, R85439, AI343336, AI168580, and AI699440. |
| HMMAQ70 | 8330 | 757070 | 1 - 428 | 15 - 442 | W04436. |
| HMMAO06 | 8331 | 935087 | 1 - 643 | 15 - 657 | AI241754. |
| HMMAL71 | 8332 | 760206 | 1 - 412 | 15 - 426 | AA449997, AL079734, AA502207, AI733856, AI683552, AL041375, AI297666, AI859438, AI279417, AA714110, AI732483, AW237905, AI366993, AA715814, AI049630, AI281561, AI053696, AI491765, W23546, AA410788, AA508809, AL047349, AI783911, AI284045, AI908093, T74524, AA704393, AI912401, AL046519, AI821881, AI753113, AI821918, AI281818, AW080215, AA669238, AI114733, AI133552, AI251576, AW243793, AA558366, AW340905, AI962030, AI054244, AI440117, AL135377, AA609834, AA584241, AW193493, AA483606, AA515138, AI620585, AW419389, AI753672, AA904275, N23913, AI936229, AA507343, AA720732, AA315361, AI620992, AA570740, AL119909, AI270177, AA535216, AI753365, AI612142, AW167154, AW407632, AI961983, AI417469, AA632765, AA503018, AA665021, AI053784, AI066646, AA128511, AA568204, AA133013, H07953, AA904211, AI597832, AI801563, AA513551, AI380617, AA568204, AA133013, H07953, AA904211, AI244985, AI284092, AI814682, AA557982, AW270619, AA084766, T05118, AI537995, AI130709, AI267356, AI267450, AA225392, AI306232, AA644090, AA610381, AW192373, AI267884, AI865213, AA533408, AW089016, AA730305, AC006312, AF030453, AC005088, AI049569, U80017, AC004851, AC005740, AC005399, AC006211, AC005081, AC005015, AC005225, AF196972, Z83844, AC009247, AF196779, AC005874, AF134471, AL096701, AC020663, AC004883, AC006511, Z83846, AC002425, AC005231, AP000558, U893336, AP000694, AC006017, AC005914, AL049795, AC005529, AC005086, AL121653, AL022163, AC005082, AC007226, AC006538, AF001552, U95740, AL035086, AI031846, AC005722, AC005527, AC004099, AC004491, AL049653, AL049565, AL050318, AC002483, AF053356, AF001549, Z93023, AL096791, AP000692, U47924, AC006115, AC002483, AL022238, AC006121, AC007308, AC007308, AC002126, AC006285, AC004876, AC005200, AC005519, AC005702, AC000094, AC006449, AP000557, AF064861, AC007421, AC007057, AC003026, AL020997, U96629, AL031281, AC004858, AC002565, AP000044, AC006006, AL080243, AC002477, AC005089, AC004796, AL049538, AC005358, Z84572, AL009183, AL049830, AL031005, AC005072, AC003982, AF130343, AP000212, AP000134, AP000967, AC004263, AC008115, AC003663, AL034420, AC005730, AL034429, AC006544, AC007384, AL132712, |

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| | | AC005921, AC006111, AC002997, AC004125, U85195, AC006064, AC002558, AC005031, AC004996, Z82244, AC002310, AL022316, AC002492, AC005005, AC005215, Z99127, AL109627, AC004534, AF037338, AC008044, AC005829, AL080242, AE000658, AC007688, AL049631, AC004019, AL022313, AC007536, AC005971, AC005821, Z97054, AC006543, AL031594, AF109907, AC007563, AP000402, AC006530, AL031662, AD000092, AC004526, U91323, AC006241, AL121652, AC003957, AC004686, AL024508, AC007686, AC002044, AC004874, AC002350, AC007055, AC005261, AC004983, AL121658, AL021393, AL031681, AL078463, AB000882, AL050341, AC005156, AC006430, AL030996, AC009516, Z95115, AL133163, I34294, AC002326, AC004881, AL033397, AC007687, AC006057, AL049636, AL024498, AC007731, AC004895, AF187320, Z97630, AL031311, AC005071, AC004757, AL132777, AB023048, AL024507, AP000223, AC004648, AC005531, Z98950, AC007225, AC006388, AC006023, M30688, D14872, AC004966, AC005920, AC003101, AC004990, AC007151, AC006509, AC005902, AL035423, AC002470, AC007193, AC005602, AC002426, AC007845, AC005331, AF134726, AC007899, AL133448, AL117352, AC007546, AC005578, AC004216, AC007707, AC002416, AC002996, AC002430, AL049776, AC005057, AJ246003, AL031848, AC005695, AC008116, AL020993, AL133396, AF207550, AC004941, AC005808, AC005666, AC005632, Z85986, AC004887, AC004890, AC004622, AC004921, AL035455, AC002316, AC003029, AP000504, AL023553, AC004638, and AC007298. | |
| HMMAL69 | 8333 | 754908 | 1 - 395 |
| HMMAL59 | 8334 | 738982 | 1 - 414 |
| HMMAL54 | 8335 | 729351 | 1 - 422 |
| HMMAL44 | 8336 | 716407 | 1 - 411 |
| HMMAL42 | 8337 | 713542 | 1 - 411 |
| HMMAL35 | 8338 | 707278 | 1 - 291 |
| HMMAL30 | 8339 | 693545 | 1 - 137 |
| HMMAL18 | 8340 | 665512 | 1 - 386 |
| HMMAL16 | 8341 | 661699 | 1 - 399 |

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|----------|------|--------|---------|----------|--|-----------|
| HMMMAK83 | 8342 | 781016 | 1 - 697 | 15 - 711 | AA007282, AI698091, AA007283, H78432, R91689, R97591, AI311305, R91688, and AI302599. | AC005255. |
| HMMMAH61 | 8343 | 741662 | 1 - 437 | 15 - 451 | H40407, AW391548, and AI356524. | |
| HMMMAF92 | 8344 | 973971 | 1 - 618 | 15 - 632 | Z99396, AW392670, AW372827, AW384394, AL119355, AW363220, AL119319, AL119497, AL119443, AL119335, AL119363, U46341, AL119483, AL119457, AL119324, AL119496, AL119484, AL119391, AL119396, AL119341, AL042614, AL119522, U46349, AL042970, AL037526, AL042433, AL134518, AL042965, U46351, U46346, AL142137, U46350, AL134920, AL46347, AL119444, AL119418, AL119320, AL042995, U46345, AL119439, AL037205, AL042850, AL038520, AL134532, AL119488, AL036268, AL119304, AL036679, AR060234, AR066494, A81671, AB026436, and AR054110. | |
| HMMMAF34 | 8345 | 842015 | 1 - 466 | 15 - 480 | AAS13125, AI926296, AI949430, AW085621, AW168103, AI583532, A1474110, AA826599, AI473995, AI073373, AA056206, AW166944, AW173443, AI037632, AA297776, N70293, AC002096, AC006080, AC005726, D84401, Z82215, AL031228, AL022067, AL034548, X87344, AC003665, AL020989, AL022097, AC005004, AL033524, AC004408, AL034554, Z95152, AC005089, Z99716, AC006597, AL132708, AL049553, AL109748, AC005858, AC007056, AC005539, AC002430, AC007384, AL022165, AC007182, AP000502, AC005859, AP000665, AL008732, AD000092, AC009464, AL031584, AC005669, AC005409, AF196779, AL139054, AF053356, AL096791, AI049869, AL109801, AL311905, Z86090, Z93020, AC003663, AC004890, AC007308, AC002470, AL031289, L78810, AC005747, AB023048, AP000511, AC005820, AL035703, AB022785, U89336, AL031005, Z84466, AC004876, AL022316, AP000555, AB014079, AC006139, AP000514, AC005088, AC002094, Z99289, AC005988, AC006117, AJ003147, AC002550, AL031284, AL034562, AC003086, and AL122020. | |
| HMMMAE45 | 8346 | 720838 | 1 - 791 | 15 - 805 | T91212, T79614, AA553354, A114465, HT75645, and AF085988. | |
| HMMMAE16 | 8347 | 856007 | 1 - 390 | 15 - 404 | AI915564, AI538833, AW449097, R333336, and R21762. | |
| HMMMAB96 | 8348 | 826488 | 1 - 772 | 15 - 786 | AL119483, AL037777, AI267356, AA298789, AI133083, AI270177, AW069227, AA381754, AI754567, AI755214, AI362442, AI249688, AI754105, AI634187, AW265155, AI249519, AI085242, AA302971, AI754687, N63149, AA584438, AI457313, AC005519, AL078584, AC005412, AC005919, AC004921, AC003012, AC000025, AC002288, AC004492, AC006017, AC005529, AC002316, AC004922, AC007114, AC002303, AC005183, AC005694, AC004228, AL034379, AL022330, AL035415, AC003049, AC007227, AC006449, AC004799, AL049776, Z83844, Y18000, AP000212, AP000134, AP000030, AL117338, AC005527, AC005243, AC005015, AC004032, AL035443, AL021368, AC005220, AC007687, AC04983, AL049829, AC007298, AF001552, AC007225, AL022334, AF196779, AC006312, AC008149, Z94056, AC002287, M89651, AC004638, AL035422, AC005730, AC007688, AC004837, AC005874, AF134471, AC005081, AC006064, AL035410, Z98200, AL135783, Z99570, Z85987, AC004770, AC002352, AC002470, AC002302, AL034548, AC004796, AC005722, U91323, U78027, AC005899, AL008635, AC005553, AC004106, AL079342, AC004825, AC007537, AC002457, | |

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|---------|------|--------|--|--|
| | | | U95739, AL035587, AC034417, AC004832, AL049759, L78810, AC004531, AC002996, AC004525, U95090, AC006450, AL11754, U22376, AC005225, Z98036, AC004491, AL049569, Z98051, AP000104, AC004382, AC007021, AL049856, AP000356, AF029308, U95742, AL049576, AC005049, U91321, Z95114, AL021154, AC007308, AC000028, U52112, AL022721, AL035249, AL035086, AC009275, AC002319, AC005488, AL031283, AC006040, Z97055, AC005666, AL035423, AL023494, AL008723, AC006568, AL022323, AC005776, AF111168, AC007790, AL008582, AC005067, AC006101, Z82097, AC005764, AC005231, AP000252, AL031591, AC004466, AC003030, AC002133, AC004841, Z95113, AL031295, AF047825, AL035071, AC005393, AC008000, AF061779, AL035400, AC006125, AL049779, AL022313, AC005800, AC004966, AC005803, AL121652, AC005632, AC007216, U91326, AL022238, AL035420, AL049766, AC004755, AL009174, AC007707, AC000391, AL021578, Z99716, AL109984, and AC006487. | |
| HMCIW93 | 8349 | 897377 | 1 - 293 | 15 - 307 |
| | | | | AW238972, AW406916, AA075901, AA044211, H25630, H43485, AA287470, AA296869, AA296696, AA298795, R55519, H80718, H73675, AA034079, AA296826, AA187096, AA218811, AA297863, AA296837, R95168, N86960, R39644, T10507, AA485829, AI342703, C00212, W95348, AA806231, AF161462, and AC002390. |
| HMCHZ77 | 8350 | 771795 | 1 - 345 | 15 - 359 |
| HMCHS34 | 8351 | 703691 | 1 - 483 | 15 - 497 |
| | | | | R07250. |
| HMCHZ77 | 8350 | 771795 | 1 - 345 | 15 - 359 |
| HMCHS34 | 8351 | 703691 | 1 - 483 | 15 - 497 |
| | | | | R07250. |
| HMCHK58 | 8352 | 752431 | 1 - 574 | 15 - 588 |
| | | | | AA160383, AI18161, AI962470, AI201401, AI962522, AI809442, AA757199, AA954406, AI557476, W46315, AI263049, AI557453, AA332432, AI867723, AA383667, AI205764, AA370001, AA157926, AA884706, and T78360. |
| HMCGX46 | 8353 | 886903 | 1 - 415 | 15 - 429 |
| HMCGV66 | 8354 | 787512 | 1 - 203 | 15 - 217 |
| | | | | AI159933, AI971968, AA906691, AI183889, W79831, N92399, AA557293, AI350318, AI017848, AA127092, AI189367, AI924445, AA911261, N70568, AI273685, AI291841, AI912574, R49953, AA937786, AA988459, AA404424, AI081962, W19157, AI129889, AA935718, AI066610, and AF111170. |
| HMCGF39 | 8355 | 856222 | 1 - 484 | 15 - 498 |
| HMCFR57 | 8356 | 734404 | ·1 - 405 | 15 - 419 |
| | | | | W27128, and H14722. |
| HMCFM86 | 8357 | 846578 | 1 - 498 | 15 - 512 |
| | | | | AI304652, AI347073, AI343275, AI261508, F26025, AA936207, N66083, AA769680, AI867524, AI262402, T99852, and AA854036. |
| | | | | N58309, AI741756, AA719678, Z39349, H77634, AA868804, AW183178, AI033908, AA910754, AA837855, AI310989, AI753587, AA907745, AA424559, AI015988, AI1290795, AA992451, AI025107, AA806009, AA007654, AI033216, AI399750, T06491, AA917469, AA134955, AI702309, AA934480, AA873079, AI097519, W90376, AI818372, R05851, AA285180, AW118589, D56552, AI474543, R98024, T03445, AA886062, AA533260, M78918, AI468146, AA309446, AA424656, AA492384, AF132945, and AF112204. |
| HMCFM04 | 8358 | 927002 | 1 - 529 | 15 - 543 |
| | | | | AA569402, AW070532, N38778, AW190781, AW340905, AA535216, AW023111, AA773463, AW237905, AA714110, AA828637, AA524616, AI674840, AI755202, AI066646, AW272294, |

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| | AA225406, AA456924, AI061313, AA632765, AW277174, AI635028, R92658, AI755214, AI754567, AA832175, AI732151, AW270768, AA704393, AA904211, AA572813, AA644090, AI291037, AI469140, AI754105, AW270619, AA630854, T50676, AA534064, AA720774, AL046519, AA715814, AW103406, AA410788, AW328331, AI004591, AA228824, AA523203, AA523204, AL079734, AI491765, AI251576, AI884383, AI053696, AA483606, AA579152, AI609972, AI923451, AI306232, AA527602, F35374, AA720732, AW151935, AI733856, AA570740, AA126475, AA613624, AI370475, AA297666, AW274078, AA653139, AW238253, AA558404, AW081485, AA548610, AI355246, AW130427, AI583466, AA829065, AW075132, H71678, AI955029, AI114733, AI590458, AW243793, H05066, AI345695, AW301771, AI133552, AW274191, AA557982, AA581525, AI801649, AI301373, AA536040, AI446452, AW167330, AI923458, AI627917, AI750865, T74524, AA700943, AA568204, AI570943, AA504818, AI249688, AI249365, Z97053, AF045555, AC005844, AC005081, U91326, AC007182, AC002544, AL031662, AC003098, AF196971, AC004895, AC006077, AC005839, AC004242, AL132641, AF196779, AC005412, AL0222323, AC007637, AC003101, AC006285, AL021878, AC005274, Z98742, AC005971, L44140, AC003029, AC007999, AF134726, U95742, AP000354, AL109628, AI049776, AL117694, AL035249, AL009181, AP000557, AC005189, AC005531, AL022322, AC005089, AL008726, AC004797, AB023049, AC004883, AC005690, AL133448, AL031321, AC004760, Z83844, AL035086, AC004647, AF130343, Z84487, U91323, AC004448, AL078638, AC006241, AL050521, AF207550, Z84488, AL008719, AF051976, AC009247, AC007435, AC007216, Z83847, AC005736, AC005280, AC004973, AL022165, AC006023, U95090, AC005486, AL121652, AC004922, Z95331, AC004531, AL024498, AL096791, AL031846, AL031280, AC003684, AL031431, AC004517, AB020865, AL035443, AP000556, AC002996, L77570, AL109798, AC004864, AC002558, AL031710, AC005512, AC007226, AC002310, AC004750, AC003108, AC006111, AC004821, AL035659, AF217403, AC005914, AC006011, AC005324, AL031587, AC002425, AC005086, AL034429, AC007055, AC005740, Z95114, AL049712, AC005944, AL034417, AC000353, AC009516, AL121653, AC004814, AL031311, AC007225, AL033397, AL078639, AF111168, AC002352, AP000501, AC004033, Z99127, AL050307, AL031295, AL049694, AC006071, AL137191, AL031432, AC002126, AC005829, AC003663, AL022315, AC005993, AC003010, AC004134, AL031597, Z97054, AL096702, Z95400, Z98752, AP000117, AC005697, AC002395, AC004552, Z95152, AC005500, AC004491, AP000030, AL034420, AL034423, Z98743, AL021453, AC005520, AP000211, AP000133, AC005088, AC000003, AC004966, AC005015, Z82182, AC007536, AJ003147, AL096712, AC004820, AC004762, AC002430, AC016025, AC004148, Z82976, Z99128, AC004241, AF067844, AC006160, Z86090, AC006130, AC006275, AF024533, AC006040, AC004099, AL035685, AC004953, Z93241, AC005519, AC004408, AP000251, AC002070, AL035422, AC002476, AL121655, D87675, AC007686, AC007384, AC006960, AL021546, |
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| | | | | AL031053, AC005229, AL031729, AC005209, AC004955, AC005509, AC004253, Z82173, U96629, AC005234, AL033376, AC005527, AC002302, AC004813, AB000877, AC002369, AC004049, Z98051, AL031668, AC007358, AC004224, AC007279, AL030996, AC003043, AC003002, AC005409, Z68321, AC004067, AL135960, AJ131016, AC007676, AC003070, AC003104, AC005666, AF064864, AC007436, AC005245, AP001053, AL031293, and AC005363. |
| HMCDN93 | 8359 | 791555 | 1 - 340 | 15 - 354 AI1889060, AW015362, AI423278, AI096899, AI498494, AI421575, H86117, AW015459, AI399718, AI972927, AA745122, R40242, AI669223, D87468, and AF193421. |
| HMCDC70 | 8360 | 757192 | 1 - 360 | 15 - 374 AI334327, AI312094, AI337819, AA506997, AA576525, H71553, and AA729906. |
| HMCAR04 | 8361 | 925591 | 1 - 551 | 15 - 565 AL048459, and 198081. |
| HMALZ77 | 8362 | 856266 | 1 - 330 | 15 - 344 AA111882, and T73731. |
| HMALK06 | 8363 | 933960 | 1 - 395 | 15 - 409 W21990. |
| HMAJZ39 | 8364 | 751523 | 1 - 532 | 15 - 546 AA182941, and Z43441. |
| HMAJL09 | 8365 | 950168 | 1 - 633 | 15 - 647 AR007575, I18860, I18861, I55990, and I55991. |
| HMAIU90 | 8366 | 8866821 | 1 - 531 | 15 - 545 AI393335, AI683302, AB008185, and AB008184. |
| HMAIQ20 | 8367 | 669436 | 1 - 446 | 15 - 460 H87256, H87307, AI640360, AI263034, and AI360741. |
| HMAIH15 | 8368 | 956705 | 1 - 527 | 15 - 541 AA585439, AI526194, Z28355, AI541508, AI541514, AI546855, AI525306, AI541523, AA585101, AI557807, AI525556, AI546999, C16300, AI541509, AI525316, AI546945, AI546899, Z30131, AI535639, AA585453, AI541510, AI541534, AI556967, AI546828, AI557799, AI557796, AI541374, AI541365, AA585434, T11028, AI547039, AI546875, R28735, AA585476, R29445, AI526140, AI525431, AA585356, D61254, AI541535, AI040149, C15189, AI541307, AI041140, AI040464, AI040155, AI041346, AI041096, AI047012, AI041358, AI557787, AI041277, AI041163, AI041098, AI040621, AI043338, AI041324, AI044162, AI041086, AI043496, AI041296, AI041233, AI045725, AI040193, AI541017, AI557731, AI041197, AI526180, AI043612, T23985, AI040463, AI047219, AI041227, AI039915, AI047170, AI080031, AI040119, AI040553, AI040529, AI041292, AI041051, AI040322, AI041131, AI046330, AI045990, AI041133, AI040253, AI041238, AI041142, AI040625, R29177, AI040510, AI043467, AA585440, AI044186, AI047057, T23957, AI044037, AI040091, AI040128, AI040168, AI040255, AI040285, AI040342, AI046442, AI040332, AI040617, AI045684, AI040576, AI040745, AI038761, AI040370, AI043677, AI049018, AI040839, AI041752, AI047036, AI041159, AI043775, AI044165, AI043492, AI041602, AI043444, AI045920, AI047183, AI038838, AI038838, AI045817, AI044074, AI041635, AI040458, AI044199, AI044187, AI040090, AI040263, AI040294, AI040075, AI040329, AI043627, AI041523, AI041730, AI041148, AI040148, AI040148, AI041374, AI040052, AI045671, AI043845, AI041246, AI039338, AI525321, AI044064, AI044064, AI038983, AI039316, AI043923, AI043814, AI043848, AI041459, AI043570, AI039744, AI041577, AI044258, AI046850, AI038532, AI040768, AI040777, AI037727, AI541013, AI040414, AI040414, AI040571, AI040472, |

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|---------|------|--------|----------|-----------|--|
| HMAEK93 | 8376 | 791549 | 1 - 750 | 15 - 764 | AA861218, AA150260, and AA150251. |
| HMADF74 | 8377 | 944465 | 1 - 1131 | 15 - 1145 | AA311043, H11578, R59755, AA927842, AA199784, AI000363, AI126309, R13187, AI693684, and AL096806. |
| HMACZ84 | 8378 | 975349 | 1 - 340 | 15 - 354 | AI000925, AI261943, AA614341, AA532388, AI000930, AI742836, AW376738, AW136154, AW376570, and E08096. |
| HMACV54 | 8379 | 922354 | 1 - 409 | 15 - 423 | AI000925, AI261943, AA614341, AA401345, AI024270, AA873221, AW082806, AW025001, AI752742, AI138745, AI277497, AW452978, AI554935, H50235, AI911227, AI700463, AW303800, AI275531, AI241950, AI760168, AI095901, AA618048, AI936652, R09749, AA936697, AI199598, AI206725, AI830389, AA084391, AA987748, H64022, H06700, AI926722, AA988399, AA838228, AI357218, AI362511, AI362439, AA937768, AI879499, AI693589, AI366339, AI363966, AW363996, T91307, AW149618, AA025560, H15722, AA991841, AA970173, Z40694, AA6633409, H20195, AW083589, AI9633935, AA843550, H64785, AI243967, AA725384, AW449564, AW450568, AW339993, W96140, W92486, H41770, and AA018786. |
| HMABT55 | 8380 | 753560 | 1 - 444 | 15 - 458 | N50809, AA931135, AA972697, AA401345, AI024270, AA873221, AW082806, AW025001, AI752742, AI138745, AI277497, AW452978, AI554935, H50235, AI911227, AI700463, AW303800, AI275531, AI241950, AI760168, AI095901, AA618048, AI936652, R09749, AA936697, AI199598, AI206725, AI830389, AA084391, AA987748, H64022, H06700, AI926722, AA988399, AA838228, AI357218, AI362511, AI362439, AA937768, AI879499, AI693589, AI366339, AI363966, AW363996, T91307, AW149618, AA025560, H15722, AA991841, AA970173, Z40694, AA6633409, H20195, AW083589, AI9633935, AA843550, H64785, AI243967, AA725384, AW449564, AW450568, AW339993, W96140, W92486, H41770, and AA018786. |
| HLYHN64 | 8382 | 970747 | 1 - 577 | 15 - 591 | N53558, AI078352, H49897, W00521, N30989, N57223, AA314759, AA431398, AA972343, AA593987, AA418304, AA101913, W90550, H67020, AW450639, N36463, AA120767, AI494530, H53270, H54554, H54238, AA011423, H66916, AA38267, AI784295, W07652, H84477, AI188087, AI379720, AA430152, and AC005859. |
| HLYHN40 | 8383 | 710825 | 1 - 468 | 15 - 482 | H82097, H10880, and H96186. |
| HLYHL55 | 8384 | 731447 | 1 - 447 | 15 - 461 | R32479. |
| HLYHK64 | 8385 | 746310 | 1 - 456 | 15 - 470 | H53572, AA745885, H28445, AI494060, AI676167, AA889745, AI866665, AI245303, AA703022, AI016995, AW264349, AI254741, AI287476, AW160916, AA580663, AI345688, AA742390, AA641818, AL138406, AI590043, AI309380, AI567846, AI537244, AW022808, AI859991, AI953765, AI037454, AIW151136, AI432644, AI500061, AW079432, AW022808, AI859991, AI953765, AI037454, AI623941, AW022636, AI287233, AI702527, AA766077, AW161579, AI540674, H89138, AI587121, AW304497, AW268759, N29277, AI673278, AI918449, AL118781, AI473451, AA811142, AI538764, AI868204, AI866461, N63128, AW161156, AI037602, AI446373, AI969655, AW020095, AI499890, AW021717, AI890907, AI345745, AA676361, AI929108, AW020419, AL039086, AL047344, AI581033, AI961278, AI537274, AI432570, AI686576, AIW020693, AI340603, AI037582, AI537677, AI621341, AI524654, AI866465, AI698391, AW162194, AI284517, AI560545, AI923989, AI241901, AI783530, AW020397, AW190297, AI135024, F26535, AI371251, AW163834, AW021373, AI289791, AI88621, AI473536, AI589428, AI696603, AI046466, F27438, AI281757, AI471282, AI636619, AI933992, AW082532, AW274343, AW051088, AI472484, AI633125, AI829990, AI538564, AI553645, AI036631, AI915291, AW152182, AW274318, AI582932, AI872423, AI540606, AI434731, AI524179, AI521560, AI889189, NS2016, AI539800, AW195253, AI309306, AW104141, |

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| HLYHK61 | 8386 | 932994 | 1 - 1027 | 15 - 1041 |
| | | | | AI628843, AW167099, AI093592, A1926603, AA470016, AI986035, AI13500, AA617710, AI027777, AA865403, AA514353, AA782005, W69345, W69267, AA860421, W01351, H30472, AA423925, AW131013, A1299627, AA423887, AA034305, AA781518, AI160307, AI446603, AA922534, AA533814, W16698, AW169172, AA654163, AA412735, N69522, AI440188, AI610236, A1752781, R26875, A1306695, AA412294, AW409605, N79834, AA459402, AI049694, AW068125, AA534481, AA745698, A1347601, N54138, AA626929, R72510, AI865836, AW044069, R94735, AA024807, R72511, AA932913, AA430220, AI383150, AI539588, W67475, AL044134, N58666, A1D23230, AW088334, AI186385, AI902383, H72504, AA295920, W38450, R70436, AA545735, AA491113, AL044135, R11021, AA834248, W67476, N58200, H72902, AA459627, R53036, R69450, AW368627, A1902360, H24955, AA431234, A1205760, AA552310, AA861991, R27103, C17844, F04994, H77299, D29280, AI436086, H25748, R53035, AA411966, AI648587, AA432254, AI002434, A1016462, R94818, AA865593, AI051263, A1926118, A1643144, R24912, R37917, AA443912, H24995, R72497, R72498, R11020, and X52574. |
| HLYHK34 | 8387 | 703776 | 1 - 505 | 15 - 519 |
| | | | | R67395, AA865763, AW238410, A1269636, A1636456, AL110306, AL119049, AI929108, AI475371, A1041772, A153723, A1492540, AL045500, AL119791, AL079963, AI497733, A1433157, AL036901, A1537677, A1868831, A1285735, A1343059, A1349933, AA225339, A1696626, AL036802, A1431909, A1433976, AA738104, A1340582, A1340603, AI800138, A1280607, AW238730, AW088899, AW151136, A1J121328, AL119863, AW071417, AL121365, A1064830, AL044207, A1909642, AW020095, A1919107, AW162071, AI500077, A1288285, A1040241, AL036396, AW074993, AI88953, AI185855, AI349645, AI344817, AW301344, AW268253, A1699865, A1312152, A1366992, A1312428, A1336575, A1349937, AI499652, A1W087445, AW089572, A1802542, AA640779, AW103371, A1349256, A1269862, A1815232, A1697324, A1280732, A1888944, A1174394, A1580190, A1951076, AW302965, A1524671, AL121270, AW167222, A1364788, AL036187, A1680162, A1251830, A1869377, A1538716, AW078680, A1349772, AA613907, A1249877, AW129106, A1446373, A1041573, A117882, A1W020164, A134972, A1340519, A120853, A1048656, A1440426, A1A427700, A1040169, A1610557, A1036361, A1047042, A1W163823, A1521012, A1567360, A1W071349, A1921248, A1627748, A1348897, A1619502, A1682743, A1687728, AW150578, A1J119748, AW026882, A135661, A1620284, A1345608, AW406745, N80094, AL036736, A1702073, A1135065, A1612913, AW168485, A1818683, A1499393, A1783504, AW268251, A1500523, A1539771, A1560012, A1250663, A1343112, A1680498, A1922901, A1349598, |

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| HL YHJ37 | 8388 | 708625 | 1 - 466 | 15 - 480 |
| HL YHJ02 | 8389 | 919201 | 1 - 522 | 15 - 536 |
| HL YHI05 | 8390 | 953925 | 1 - 476 | 15 - 490 |
| HL YHF62 | 8391 | 743058 | 1 - 357 | 15 - 371 |
| HL YHE85 | 8392 | 784140 | 1 - 500 | 15 - 514 |
| HL YHA48 | 8393 | 721372 | 1 - 489 | 15 - 503 |
| | | | | AA251190, AA805977, AA765489, AA810907, AL118823, AA081462, H18914, AL135357, AA493136, R17793, AL118862, AA654661, A1524360, AI745151, AI755214, AA845209, AI284092, AA984114, A1754567, AA845659, N71685, AA002063, AI754105, AA584125, N57739, AA748833, AW179306, AA643801, AA548356, AL138182, AA282820, AA126450, AA664320, AI683446, A1270096, AW179305, AL049834, AL031733, AC009399, AC005829, U91323, AL034418, AL049765, AC002544, AC004031, Z83822, AL135744, AP00251, AL023803, AC008085, U95742, AC007065, AP000031, AL049610, AC007938, AC006442, AC000004, AP000134, AP000212, AP00030, AC007216, AC009044, AC006241, AL049829, AC005874, AF134471, AL049712, AC006509, AC005823, AL031587, Z85986, AC005488, Z86090, AC005233, AC005736, AC004837, AC007240, AF064861, AL132777, AL117338, AP000213, AC005755, AL078638, AP000135, AC007011, AC006111, Z83840, AC005037, AC004098, Z98036, AC007731, AC005005, AC007686, AL022165, AP000688, AL023799, AP000356, AC008101, AL031584, AC005484, AC003664, AC003982, U52112, AL035681, AC006441, AC007386, AL031053, AC002375, AP000692, AC005324, Z98304, AL022316, AC005899, AB003151, AC006958, AC005412, AC003098, AC007014, AC005225, AF107045, AC003029, AC005740, AL022574, AL121652, AC004821, AC005911, U95743, AF196779, AL031427, AC004905, AC006064, AC007707, AC003688, AC006511, AC007566, AC008079, AC006146, AC005180, AC002119, AC005102, AC004615, AC005523, AP000493, AL031311, AC004032, AL035071, AC004859, Z94721, AC004966, AL049576, AC005914, AC006317, Z98946, AL121658, AC004526, AC009247, AP000557, AC007934, AC005399, AC004895, AF111168, AL122020, AC007314, AL031431, AC005018, AC005091, AC005971, AC002565, AC005924, AC006581, AP000556, AF024533, AC004605, AL021918, AL035587, AL034417, AC005215, AC004134, AC006084, AC008009, AL021154, AC002477, AC0008372, AC004257, AP000513, AC006515, AF001549, AC005545, Z82172, AL022323, Z75888, AC006167, AC005520, AC004167, AC007262, Z93017, Z81364, AC004491, AC004150, AC006079, AL096791, AL110502, AF051976, AL022163, AL049646, AL031230, AL109842, AL022476, AC006538, AC009516, AL021516, AL078477, AL035089, AL096712, AC007666, AC004813, AC005996, |

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| HLYHA04 | 8394 | 614848 | 1 - 369 | 15 - 383 | H60556, and T71255. |
| HLYGZ71 | 8395 | 760115 | 1 - 1102 | 15 - 1116 | AA043495, AI951943, AW193804, AI694511, AI128000, AA412019, AI004612, AI652122, AA149258, AI184929, AI831205, AI914140, AI825243, AI828310, AA720916, AW016629, AI827812, AI696053, AI631553, AI962314, AI671447, AI917812, W16795, AA338943, AI968277, AI967940, H24914, AA149273, AA338944, AW196482, AA973869, AI962471, AA905468, AI594723, AI874337, and AC004707. |
| HLYGZ11 | 8396 | 966503 | 1 - 631 | 15 - 645 | N69782, and AI282808. |
| HLYGY60 | 8397 | 740081 | 1 - 510 | 15 - 524 | AA699729, W04930, AI200342, AI742692, AI571717, N31641, AA255846, AA158572, AI672122, H09986, AI872640, T97584, R11183, AL050099, AF090421, and AF074393. |
| HLYGW95 | 8398 | 795682 | 1 - 547 | 15 - 561 | AW026243, AI040710, W84710, AW008549, AA573109, AA236651, and W78856. |
| HLYGR56 | 8399 | 733123 | 1 - 623 | 15 - 637 | AA149383 |
| HLYGQ29 | 8400 | 689972 | 1 - 423 | 15 - 437 | R37228, R21422, and AI336270. |
| HLYGQ11 | 8401 | 966539 | 1 - 335 | 15 - 349 | AA251264. |
| HLYGM76 | 8402 | 769835 | 1 - 438 | 15 - 452 | AI914239, AA164188, AA911297, and AI299137. |
| HLYGM08 | 8403 | 958820 | 1 - 96 | 15 - 110 | R25343. |
| HLYGT6 | 8404 | 685240 | 1 - 552 | 15 - 566 | T48433, AI767091, AC002300, and AC007637. |
| HLYGH51 | 8405 | 871634 | 1 - 451 | 15 - 465 | RO7073, and AC009363. |
| HLYGD69 | 8406 | 754841 | 1 - 289 | 15 - 303 | AA829595, and R96050. |
| HLYGB38 | 8407 | 709187 | 1 - 403 | 15 - 417 | H60939, and H60852. |
| HLYFW38 | 8408 | 709185 | 1 - 378 | 15 - 392 | AA011710, R07553, H90263, and AC003006. |
| HLYFU24 | 8409 | 856392 | 1 - 523 | 15 - 537 | T93162. |
| HLYFR17 | 8410 | 859567 | 1 - 779 | 15 - 793 | AW139151, AI871342, AI763244, AI452467, AI553909, AA948409, AA010128, AI222204, AI143693, AI422032, AI273370, AI272906, AA854857, AI139496, R42952, AI192619, AW205762, AA853531, AI498208, AA736592, Z41265, AA010127, AI073814, AI928656, R64374, and R64373. |
| HLYFP56 | 8411 | 871637 | 1 - 510 | 15 - 524 | AA811657, AI342538, AW204675, AA748459, AA252369, and AL109939. |
| HLYFO29 | 8412 | 690381 | 1 - 508 | 15 - 522 | AA058482, AI784112, AL022476, and AC004924. |
| HLYFE11 | 8413 | 966519 | 1 - 641 | 15 - 655 | AA777743, U95742, and AC007216. |
| HLYFD51 | 8414 | 725116 | 1 - 536 | 15 - 550 | H09377, AW405976, AA281160, AB018260, and AC007868. |
| HLYFC54 | 8415 | 729299 | 1 - 528 | 15 - 542 | H81232. |
| HLYEV46 | 8416 | 889678 | 1 - 453 | 15 - 467 | AW016081. |
| HLYEV42 | 8417 | 856395 | 1 - 571 | 15 - 585 | T95746. |
| HLYET54 | 8418 | 729406 | 1 - 542 | 15 - 556 | R94090. |
| HLYET48 | 8419 | 721501 | 1 - 416 | 15 - 430 | R19796. |

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| HLYET17 | 8420 | 662764 | 1 - 406 | 15 - 420 | R10240. |
| HLYES45 | 8421 | 717640 | 1 - 629 | 15 - 643 | R13145, AW402725, and AA322385. |
| HLYPEP59 | 8422 | 739151 | 1 - 523 | 15 - 537 | T72749, and T78529. |
| HLYE083 | 8423 | 781038 | 1 - 623 | 15 - 637 | AA088553, W27797, AA085803, AA088387, and AA811260. |
| HLYE037 | 8424 | 708623 | 1 - 622 | 15 - 636 | H73386. |
| HLYEL71 | 8425 | 760220 | 1 - 536 | 15 - 550 | AA234738. |
| HLYED44 | 8426 | 716430 | 1 - 341 | 15 - 355 | AA074364. |
| HLYEC21 | 8427 | 670678 | 1 - 411 | 15 - 425 | N55397. |
| HLYEB11 | 8428 | 966748 | 1 - 338 | 15 - 352 | H81361, T86913, R11275, and T81629. |
| HLYE92 | 8429 | 561537 | 1 - 390 | 15 - 404 | AC004904. |
| HLYE86 | 8430 | 488801 | 1 - 416 | 15 - 430 | H60327. |
| HLYEAT0 | 8431 | 943886 | 1 - 739 | 15 - 753 | W79930, AA233418, T87364, AI765694, AI042017, AI672297, T87365, R94396, AI082728, R78669, R32116, AI768587, AI025761, AA564574, AI142898, AW026724, AI183414, AW183773, AI075126, AA127962, AI910695, N34843, AI628624, AW192585, H64364, H48681, AW263057, R32115, and H65991. |
| HLYEAE49 | 8432 | 722787 | 1 - 319 | 15 - 333 | T63328. |
| HLYDY72 | 8433 | 761359 | 1 - 465 | 15 - 479 | T62223. |
| HLYDX40 | 8434 | 8564401 | 1 - 447 | 15 - 461 | H97055. |
| HLYDV57 | 8435 | 800224 | 1 - 196 | 15 - 210 | AA015905, and Z94054. |
| HLYDU14 | 8436 | 658035 | 1 - 431 | 15 - 445 | T69478. |
| HLYDT27 | 8437 | 8564405 | 1 - 591 | 15 - 605 | AA776723, AA683336, AI767217, and AI286332. |
| HLYDT09 | 8438 | 972424 | 1 - 399 | 15 - 413 | |
| HLYDQ75 | 8439 | 767176 | 1 - 1007 | 15 - 1021 | AA203659, and AW241874. |
| HLYDO45 | 8440 | 717079 | 1 - 430 | 15 - 444 | H52699, AI792315, AI792132, AA602938, AI821784, and AA632549. |
| HLYDK95 | 8441 | 973370 | 1 - 448 | 15 - 462 | Z97832. |
| HLYDI03 | 8442 | 923826 | 1 - 374 | 15 - 388 | D29106. |
| HLYDG74 | 8443 | 939025 | 1 - 468 | 15 - 482 | H13358, Z42104, H17403, and AI016363. |
| HLYDG42 | 8444 | 713579 | 1 - 394 | 15 - 408 | H48653, and AC005971. |
| HLYDF07 | 8445 | 952940 | 1 - 531 | 15 - 545 | AI475857. |
| HLYDD60 | 8446 | 740212 | 1 - 469 | 15 - 483 | AA255936. |
| HLYDB08 | 8447 | 959076 | 1 - 375 | 15 - 389 | AA704579. |
| HLYCX70 | 8448 | 757087 | 1 - 743 | 15 - 757 | AW136494, AA975914, W01691, T78992, H82694, and AI696519. |
| HLYCX34 | 8449 | 703910 | 1 - 507 | 15 - 521 | R93349. |
| HLYCX18 | 8450 | 943714 | 1 - 444 | 15 - 458 | N23033, N28696, AI417970, AI379543, AI288223, AL119457, AL119464, AL134536, U46351, AL119324, AL119401, AL134525, AL119341, AL142131, AL037205, AL119484, AL134902, AL134531, AL134527, AL119355, Z99396, AL119418, AL042433, AR054110, and AR066494. |

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| HLYCX02 | 8451 | 919563 | 1 - 486 | 15 - 500 | AI149248, and AC004217. |
| HLYCU59 | 8452 | 679219 | 1 - 647 | 15 - 661 | N50536, N50591, F25082, F31286, AA708834, AI128677, AI141858, AA496237, AI204314, AI087869, F27745, AI096570, W58285, AW044334, F24116, N93239, F34390, AI097157, N77900, AI694918, AI302021, F28502, F24691, AI216592, AA496229, AI1215933, AI118557, N91784, AI015748, AA1369658, AI383691, F21399, N93026, F35775, AA249321, F28306, W93864, F24386, AI911727, AI031778, AF161698, and AF086496. |
| HLYCQ43 | 8453 | 825509 | 1 - 776 | 15 - 790 | AA533040, AI096701, Z92542, AC003007, AC002565, AC007308, AC006111, AC008079, AC007193, AC004526, AC006077, AL031283, AC005015, AC005081, AL133246, AC008101, AC004263, AC005399, AC0043882, AC006211, AL020997, AP000512, AI133485, AC016831, AC002365, AC004821, AC007225, AL049776, AF095901, AC004382, AC005519, AC002470, AC020663, Z95116, AC004491, AC004851, AL029993, Z97053, AC005067, AP00047, AC006368, AC006950, AC002472, AP000065, AL049869, AC005089, AC006449, AL121658, AC005180, AC002288, AC005280, AL080243, AC005632, AI049872, AC005057, AC005071, AC005972, AC005037, AC007637, AC004966, AC002126, AC005529, U62293, AJ011930, AF124523, AP000689, AF227510, AC007993, AC005225, AL031295, AL022237, AP000115, Z84469, AC002504, AC005839, AF196779, AC004084, AC007386, AC004859, U91321, and AC005756. |
| HLYCP63 | 8454 | 856424 | 1 - 354 | 15 - 368 | AA572949, AI808652, and AI911457. |
| HLYCO03 | 8455 | 923844 | 1 - 658 | 15 - 672 | AA131813, AA131743, AA255495, AA256703, and AL021978. |
| HLYCM14 | 8456 | 657589 | 1 - 387 | 15 - 401 | R95898, AI719970, AF130247, and AF165138. |
| HLYCL69 | 8457 | 914887 | 1 - 495 | 15 - 509 | H81370, AA156982, and AA045946. |
| HLYCF51 | 8458 | 725067 | 1 - 435 | 15 - 449 | T99595, and AI563950. |
| HLYCF37 | 8459 | 949401 | 1 - 1327 | 15 - 1341 | AL138431, AL042377, AI871691, AI423034, AI419419, AW020150, AI380617, AI801479, AI440117, AI043052, AL044489, AW237905, AI904840, AL118843, AA282951, AW020094, AA225406, AL041375, AW021399, AW272294, AL037910, AI066646, AA551519, AW268322, AI279417, AI800426, AL135357, AA594157, AL138455, AA713946, AI242011, AI635028, AW238712, AI479148, AI041924, AA714110, AA760655, T05118, AI054418, AW275432, AI110373, AI356440, AA720582, AA584765, R98002, F30310, AA286836, AI554471, AA847395, AI445224, AI049643, AI095197, AI270177, AI032875, AA654874, AA80153, AI955029, W02749, AI086646, AW340905, AL042753, AI445297, AI755202, AL022165, AC002558, Z86090, AF205588, AL035420, AC006965, AC004832, AL022721, AC005779, AC005088, AC002563, AC005005, AF196779, AC004987, U91323, AP000116, L78810, AC007283, AC002991, AC010077, AC002477, Z99716, AC005527, AC005409, AP000042, AL022238, AC004383, Z95116, AL035405, AC006480, AC004813, AC002430, AC006211, AC005081, AP000045, AC007899, AC004858, AL096791, AC005291, AC006441, AC007055, Z95114, AC007384, AC002369, AC002401, AC00519, AL00519, AC002401, AC002401, AC004874, AL023584, Z82206, AL031005, Z84487, U47924, AC005940, AC005180, AC004662, AL005852, |

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| | | AL121603, AC004033, AC002288, AP000311, AC006312, AL109798, AC005225, AL049872, AC005015, AF001549, AC005365, AL136295, AC005971, AP000289, AC007934, Z84466, AC005871, AL031311, AC005086, AC005902, AP000110, AC006241, Z85996, AC004883, AC005071, AC004125, AC012384, AP000692, AL031228, AF001548, Z98036, AC007193, AC005072, AL035659, AP000117, AC007563, AC003663, AC005529, AL050318, AF047825, AC004953, AL109827, AC002044, AL022318, AC004703, AF017104, AC002554, AC005663, Z93244, AL032821, AC007225, L44140, AC005829, AJ003147, AC006948, AF038458, AC005911, AC006121, AC006511, AL020997, AF053356, AL031597, AC002504, Z98743, AC002394, U95739, AP000501, AC006323, Z94056, AL008726, AC004084, AC004520, AL122020, AC005006, AC007057, AP000313, AL031680, AC005666, AC004814, AC005726, AL109952, AC004685, AF024533, AC002565, AL049552, AL008718, AC005696, AL031281, U91321, AP000252, AC005207, AL031667, AC004408, AC005037, AC004492, AL022311, U966629, AC016830, AC006285, AL133163, AC007216, AL021977, AP000030, AC002314, Z82203, AL049779, AC007676, AF129756, AL132712, AP000356, AC005800, AP000050, AC004876, AL121754, AC004851, AC005695, Z77249, AC004672, AP000103, AL034421, AL031846, AL080317, AC005900, AC005484, AC005332, AC006255, AC004263, U62317, Z98304, AC002544, AC004878, AL023653, AC005190, AL049694, AC002365, AF134726, Z93017, AL121655, AC006538, AF111168, AP000133, AP000211, AF030453, AC006449, AC000052, AC005730, AL022334, AC004583, AC003015, AC006014, AC005933, AL021918, U91326, AC003029, AC004859, AL035587, AC002375, AC004686, U95090, AL009181, AC007386, AL078581, AL049780, AC007298, AC003072, AP000167, AC004881, AL049856, AC004765, AC004560, AC004139, AC007686, AL109984, AC004966, AC004991, AC003043, AP000301, AL049869, AC004983, AL022315, AC005520, AF001550, AC005500, Z98742, AL035455, AC007151, AC002551, AC010072, AC007227, and AC007731. | |
| HLYCC19 | 8460 | 668745 | 1 - 472 |
| HLYCB86 | 8461 | 785544 | 1 - 444 |
| HLYCB11 | 8462 | 967162 | 1 - 573 |
| HLYBX91 | 8463 | 790234 | 1 - 764 |
| HLYBV44 | 8464 | 485853 | 1 - 479 |
| HLYBN17 | 8465 | 463988 | 1 - 519 |
| HLYBM44 | 8466 | 715879 | 1 - 442 |
| HLYB17 | 8467 | 664101 | 1 - 415 |
| HLYBH84 | 8468 | 856444 | 1 - 486 |
| HLYBH68 | 8469 | 586582 | 1 - 684 |
| HLYBG85 | 8470 | 783508 | 1 - 472 |
| HLYBA50 | 8471 | 880734 | 1 - 556 |

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|---------|------|--------|---------|----------|---|-----------|
| HLYBA06 | 8472 | 935611 | 1 - 527 | 15 - 541 | AA736563, AA642445, AA838190, AA724333, AA669153, AA380354, AI537772, AI114701, AW439555, H18914, AL119800, AI950671, AW151713, AW302909, AA665146, AW021161, AW304580, AW440545, AW301385, AA704393, AA832077, L35667, AC006538, AP000556, AP000557, AL009031, AF135187, AC005612, AL136297, L76568, U07562, AC007199, Z85987, AP000065, AL050348, AL031714, AC004020, AC006285, AC002326, AC005815, AL133239, AC016025, AC006126, K02579, AC003070, AC004975, AP000509, AL033523, AL031279, AP000690, AC002119, AC002301, AC005211, AF207550, AC004262, AL033517, AC005071, AP000359, AC007128, AC005933, AL024498, AC004051, AP000208, AP000130, U89337, AL031281, AC005952, AC005005, AC004590, AC004017, AC012083, AL022322, AC004887, AF007544, AL133102, AL049636, AC004832, AP000691, AF196969, AF217403, AC005519, AL035684, AC005067, AF111169, AC005377, AL022332, AC004983, AL022330, AC005324, Y07848, AL031664, AC005901, AC004813, AL079304, AC003969, AC005783, AF067844, AL020996, AF200465, AP000030, AC000026, AL024474, AC007639, AC004659, AC007637, AP000553, AL008721, AP000246, AC002059, AL050341, AC004751, AL109802, AL022100, AL080313, AP000134, AP000212, AP000964, AF190465, AL021392, AL049766, AC004775, AC005730, AL079301, AL024508, AL021155, AL022237, AC004458, AC004694, AL022333, AL008582, AL023575, AC005484, Z77249, AL009179, AL049795, AC005907, AL096794, AC006047, AC006509, AP000695, AC012384, AC005756, AC006211, AC007686, AC006013, AL034451, AL139054, AC005585, AL031680, AC005702, AC005081, AF031078, Z99716, Z84466, AL031663, AC004235, AB022785, AL031297, AF030876, Z82189, AC005578, AC002476, AP000008, AC005379, AC004921, AL049611, AC005940, AP000697, AL049712, AC004985, AP000967, AC007011, AC007546, AF030453, AC002070, AD000671, AC005799, AC002565, AL008734, AC006071, AC007790, AC007899, AC004889, L44140, AC001227, Z86090, AP000704, and Z97989. | AC004242. |
| HLYAX75 | 8473 | 767225 | 1 - 342 | 15 - 356 | AI926931, T92757, and AC004984. | |
| HLYAX32 | 8474 | 699337 | 1 - 188 | 15 - 202 | AA693492, AW404616, W15342, AA081452, T87195, AA360189, AI984687, T87282, and | |
| HLYAU15 | 8475 | 782335 | 1 - 570 | 15 - 584 | AL117352. | |
| HLYAS35 | 8476 | 856469 | 1 - 430 | 15 - 444 | AA703693. | |
| HLYAR25 | 8477 | 678179 | 1 - 470 | 15 - 484 | AA193337. | |
| HLYAQ92 | 8478 | 792770 | 1 - 388 | 15 - 402 | AI557306, AI623716, AA831121, AA687968, AA768629, AI458826, AI280154, and N42105. | |
| HLYAQ70 | 8479 | 757235 | 1 - 793 | 15 - 807 | R93501, R91736, R92164, and R93500. | |
| HLYAQ69 | 8480 | 754229 | 1 - 329 | 15 - 343 | R38112, and AL109679. | |
| HLYAN68 | 8481 | 815950 | 1 - 365 | 15 - 379 | AL109628. | |
| HLYAN21 | 8482 | 854034 | 1 - 330 | 15 - 344 | | |
| HLYAN10 | 8483 | 964834 | 1 - 651 | 15 - 665 | AA487424, AA578890, and AI524037. | |
| HLYAL58 | 8484 | 736097 | 1 - 593 | 15 - 607 | H10627, and R15002. | |

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| HLYAL22 | 8485 | 856473 | 1 - 443 | 15 - 457 | AA847181, AA470533, AA484373, AW243954, AI821918, AI821881, AI268334, AI268336, AI805363, AA191659, AA507912, AI470431, AA583218, AA715805, AA583229, AA600869, AA605272, AL038936, AI065038, AI805547, AA683238, AA527209, AI470437, AI500453, AI250083, T60681, AW002350, AW102846, AA468022, AA501718, AI932599, AW277171, AA757775, AI801482, AA326356, AI460009, AI908093, AA811208, AI079683, AI469599, AA947454, AA351235, AA714110, AA578907, AA308328, AA420998, AI817976, AA421078, AI669046, N84446, AA651632, AA492391, AA469451, AL031228, AP000512, AI035530, AC002314, AC000003, AC007666, AL031005, AC005387, AC004821, AL050332, AC005231, U07561, AC005089, AC005015, AL021366, AC005919, AL133245, AC007225, AC005041, AF165926, AC007686, AC005971, AF207550, AC007364, AC005480, Z83840, AC002418, AC005066, AC004806, AC004659, Z95114, AC005102, AL139054, AP000553, U85195, AL133448, M63796, AC004148, AL049776, AP001137, AC007536, AC004972, AC005071, AL135744, AC005250, AP000557, AC006270, AE000658, AC004560, AL096703, AC004386, AL031848, AP000348, AC004098, AP000347, AC004858, AC002073, AL009181, AF053356, AC005034, AC004804, AP000688, AC004878, AC005324, AL049795, AC016025, Z93017, AC005399, AP000359, AC004019, AF129756, AC006064, AL031597, AC005330, AC020663, AC004883, AC005412, AC003041, AL049839, AC005393, U95742, AC005736, AP000010, AP000152, AC004895, AC005519, AF111168, AC007066, Z97054, AL022476, AC002558, AC007216, AL031680, AL049745, Z84474, AP000146, AP000337, U47924, AC004638, AC006285, AC005410, AL022724, AL050338, AL031777, AC005880, AP000117, AL022238, AC004797, AL031283, AL031587, AL031055, Z92542, AC007387, AC009247, AC004967, AL031311, AC007050, AC005484, AC005291, AC002126, AL080242, AF069489, AC002470, AL024507, AC002350, AL022237, AF109907, AL031662, AC004913, AJ003147, AL021707, AF196969, AC002563, AL022316, AC004381, AP000263, AC002312, AC004760, Z93241, AC006130, AL035450, AC004912, AC000353, Z84469, AL078581, AF031076, Z86090, AC005215, U29953, AC005740, AL135783, AC007308, AP000556, AL117354, Z85986, AL049766, AC006315, AL022320, AC006312, AL121653, AC003664, AL049569, AC004755, Z99716, AC000079, AC004848, AL049761, AC002553, AC002565, AL034379, AL132987, AP000692, AD000812, AP000087, AC000026, AC004813, AC005921, AL008720, AL031668, AC005500, AC004167, AC005225, AL117258, AC004998, Z99128, AC003029, and AL121934. |
| HLYAL11 | 8486 | 967173 | 1 - 327 | 15 - 341 | AA809368, AW190881, and AI240461. |
| HLYAK36 | 8487 | 708028 | 1 - 356 | 15 - 370 | T92768, and AA682689. |
| HLYAK34 | 8488 | 421604 | 1 - 430 | 15 - 444 | AA013385, W96162, H84095, AA054036, H84089, H86124, AA018232, AA018236, and AA058598. |
| HLYAJ49 | 8489 | 723039 | 1 - 422 | 15 - 436 | W24486, C06267, R42858, AA978262, AA505146, AI636820, AI143214, AA045249, AI677860, AA491378, AA255801, and AL031297. |
| HLYAG59 | 8490 | 888232 | 1 - 427 | 15 - 441 | |

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| HLTHS37 | 8491 | 708613 | 1 - 789 | 15 - 803 | T84485, and T84484. |
| HLTHS02 | 8492 | 856560 | 1 - 346 | 15 - 360 | T81238. |
| HLTHC37 | 8493 | 708620 | 1 - 625 | 15 - 639 | R51493, and AI702381. |
| HLTGT83 | 8494 | 780903 | 1 - 446 | 15 - 460 | R58966, AW173238, AW188064, AA847255, and AI808879. |
| HLTGT36 | 8495 | 708027 | 1 - 863 | 15 - 877 | AW131623, W69435, W69518, AW449813, AI381962, AW166061, and AB020725. |
| HTLGS17 | 8496 | 662409 | 1 - 490 | 15 - 504 | H66393, AA077817, AI357551, AA342901, F19258, AI914706, AW265197, AW074398, AI561335, F31204, AA228329, AA515128, F37286, N71724, AA368745, AA077952, AI886176, AW276435, AA654627, AA714140, AW406659, AA304977, H55859, AI249997, AI305547, AI553983, F29989, AI610159, AI184226, AI345518, N23649, AA584749, AI613280, AA443065, TT71998, AI284640, AA580662, AA650244, AW265654, AI003734, AI989742, F17518, AA340003, AI041368, AI287528, AI349874, F28576, AI358229, AI061334, F36273, AW438643, AI569086, AA515224, AI469172, AW406755, AI471481, AI298281, AW270284, AI365988, AA601270, AI557323, AA578154, N43757, AI473090, AA879053, AW151884, AA743956, AW337985, AI801600, AI951928, AI079910, AI286264, AW339687, AA299601, AI872421, AW130799, AI951889, AI445436, T12272, AI890052, AA127636, AL138265, AA450199, AI963786, AI635272, AI708009, AI587006, AA729264, H64560, AI299950, AA341228, AW340844, AI345675, AA665192, AW102955, AI921649, AI079645, AW021747, AI345681, AW168433, AI225141, AW022046, AI801591, AI344844, AI274692, F33566, AA658235, AI807372, AA641103, N25296, AI168185, AI421213, AW274349, AI376100, A1816537, AA745560, AI433187, T065556, AA295899, AW157005, AI824562, AW188544, AA501344, AA745431, AA745410, AI015912, AI499503, AA747472, AI028510, AA483204, AI471464, AA758934, AA605274, AW303196, AI042856, AW301350, N69962, AA626637, AI471487, AA558269, AW074059, AF177861, AA776609, AI688846, AI356904, AI049634, AI340453, AI922654, AI5644284, AI537955, AA176924, AC004142, U020448, L13709, M87918, L13713, L13714, AC006379, AC006241, AF002991, AC007488, AC006221, U52427, AL096775, D83989, AC004949, S42659, AC005003, AC005944, U02058, M87919, M87923, AL023284, AC006597, AC004027, AL121603, X55932, AC005722, AL023879, AC005485, U18393, AL035494, AC005225, AC002564, AF077058, Z50860, AF053356, Z49237, AL023807, AP000432, AC005091, AC004998, AC005332, AL050312, S70694, AC002429, AC002347, AC006076, AP000082, AC007750, Z84721, AL031005, AC006538, AB020865, AP000346, U14702, AC009225, U95742, AC002059, AC005771, AC004232, AE006662, U02063, AC033681, AC007226, AL109865, L48472, AL049871, Z83849, AC004028, M94081, AP000431, AC007681, AC005694, AC007917, X55922, AL049829, AL049759, AL050333, AL096702, AL121653, AC004236, AC003954, AC005237, AC005324, I51997, AC009247, AC005032, Z97183, AL0222318, AL121658, AC005610, AC005913, AC004765, U80017, AC002984, AC004927, AL078614, AP000128, AP000026, U52112, AP000351, AC004638, AP000114, Z83840, AC005527, AC006537, X55926, AL034400, AC002312, AC004678, AL021918, AC002116, |

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| | | AI535686, D59551, D59317, D59474, D50981, AI525920, D45273, C14973, C14344, AA514184, AA598998, D60010, AI525235, D60214, AI525215, AI525227, AC008079, AC007324, AC008101, A62298, A62300, A84916, AI132110, AR018138, X67155, A67220, D89785, A78862, A25909, D26022, D34614, Y17188, AR025207, D88547, AR008278, AF058696, AB028859, X82626, Y12724, X68127, AB012117, A85396, AR066482, A82595, A85477, AB002449, A86792, AR060385, II19525, A94995, U87250, A44171, X93549, AR008443, I50133, I50126, I50132, I50128, AF135125, AR066488, AR016514, AR060138, A45456, A26615, AR052274, AR038669, Y09669, A43192, A43190, AR066490, I18367, A30438, AR066487, I14842, D88507, AR054175, D50010, Y17187, AL050343, AC007124, AL050324, AR008408, AR064240, AR008277, AR008281, A63261, AC007964, AR062872, A70867, AR016691, AR016690, U46128, A64136, and A68321. |
| HLTGP47 | 8498 | 719975 1 - 433 15 - 447 AW393850, AA1949696, and AW274557. |
| HLTGO89 | 8499 | 786674 1 - 594 15 - 608 R24848, and Z43303. |
| HLTGN92 | 8500 | 791185 1 - 358 15 - 372 R83296, H61528, R06428, and AA497003. |
| HLTGA40 | 8501 | 710728 1 - 401 15 - 415 H12953, AA436993, and AA426378. |
| HLTEZ30 | 8502 | 960911 1 - 338 15 - 352 T85564, T84409, AA361578, and R08443. |
| HLTEZ19 | 8503 | 671610 1 - 705 15 - 719 N98660, A1052555, A1033178, R16888, and AA437100. |
| HLTEX27 | 8504 | 927578 1 - 336 15 - 350 N95142. |
| HLTEV66 | 8505 | 772965 1 - 506 15 - 520 AA046570, A1912976, A1810637, A1400892, A1420896, AA317499, N44648, A1085349, T49602, A1825760, A1650498, AA046705, AA782778, H05628, and H17485. |
| HLTBP45 | 8506 | 723375 1 - 524 15 - 538 AA159675, and AC007068. |
| HLTEM25 | 8507 | 678685 1 - 508 15 - 522 R14032, AA825482, H95342, H70614, and AC004921. |
| HLTEG51 | 8508 | 494330 1 - 605 15 - 619 |
| HLTEG37 | 8509 | 4117243 1 - 363 15 - 377 W40567, AL040311, AA905330, AA677615, AW205363, and D80009. |
| HLTEC83 | 8510 | 574630 1 - 213 15 - 227 |
| HLTEC35 | 8511 | 574632 1 - 266 15 - 280 |
| HLTEA20 | 8512 | 669900 1 - 582 15 - 596 AA007473, W93011, Z44985, AA430251, and N71668. |
| HLTDR43 | 8513 | 715529 1 - 664 15 - 678 A1953354, H16401, H00613, F09067, R82764, Z38624, and T17430. |
| HLTDI17 | 8514 | 577379 1 - 657 15 - 671 W56369, H84793, AA913919, AA485021, AC007387, AC006543, and AC006544. |
| HLTDH96 | 8515 | 796560 1 - 275 15 - 289 NT2412, and A1689177. |
| HLTDG59 | 8516 | 739699 1 - 340 15 - 354 T81367, AA372287, R50286, W30782, and AL137669. |
| HLTDG30 | 8517 | 693329 1 - 345 15 - 359 H85024. |
| HLTDB38 | 8518 | 456860 1 - 418 15 - 432 R95058, and R83706. |
| HLTCZ55 | 8519 | 732385 1 - 312 15 - 326 AA429774. |
| HLTCX39 | 8520 | 705648 1 - 432 15 - 446 AA157834, and AF095703. |
| HLTCI77 | 8521 | 772458 1 - 356 15 - 370 H84601, and AW379855. |

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| HLTCR77 | 8522 | 772457 | 1 - 373 | 15 - 387 | H84886. |
| HLTCR11 | 8523 | 967559 | 1 - 335 | 15 - 349 | AA548022, and AC005740. |
| HLTCM59 | 8524 | 442563 | 1 - 1173 | 15 - 1187 | AA633942. |
| HLTCI43 | 8525 | 715530 | 1 - 487 | 15 - 501 | R12467, and AB020672. |
| HLTCI11 | 8526 | 967541 | 1 - 303 | 15 - 317 | AI150147, and AI362692. |
| HLTCH41 | 8527 | 507362 | 1 - 353 | 15 - 367 | R67858, and AC008033. |
| HLTBU47 | 8528 | 720662 | 1 - 342 | 15 - 356 | H54393, AA476547, C02267, and AA445910. |
| HLTBU44 | 8529 | 522741 | 1 - 435 | 15 - 449 | |
| HLTBS07 | 8530 | 954407 | 1 - 235 | 15 - 249 | AI569948. |
| HLTBFF58 | 8531 | 735194 | 1 - 364 | 15 - 378 | H38593, AA361336, Z99571, and Z83820. |
| HLTBF56 | 8532 | 907024 | 1 - 513 | 15 - 527 | AA521184, AA766096, AA743785, and AA361334. |
| HLTBA68 | 8533 | 753857 | 1 - 408 | 15 - 422 | R18278, R17529, AA361271, AA019429, T66081, F12334, and AW025272. |
| HLTBA41 | 8534 | 712721 | 1 - 653 | 15 - 667 | W78875, AA463793, R10150, AA814668, AA779112, R10157, AI351903, AA361232, and AC004554. |
| HLTBA35 | 8535 | 707243 | 1 - 366 | 15 - 380 | AA150350, and AA361174. |
| HLTAM07 | 8536 | 954419 | 1 - 653 | 15 - 667 | AA282169, AA987588, and AA360588. |
| HLTAK57 | 8537 | 735163 | 1 - 213 | 15 - 227 | NA45611, and AA360686. |
| HLTAA39 | 8538 | 710361 | 1 - 635 | 15 - 649 | W55847, T65532, F11980, AA255754, AA360399, and N45924. |
| HLTAA27 | 8539 | 684649 | 1 - 377 | 15 - 391 | R73095, R26859, R73096, AA360390, and R27089. |
| HLMNNU01 | 8540 | 916641 | 1 - 484 | 15 - 498 | AA828265, and AW262531. |
| HLMNQ18 | 8541 | 666544 | 1 - 475 | 15 - 489 | AI076363, AA001640, and AA001228. |
| HLMMZ09 | 8542 | 575837 | 1 - 458 | 15 - 472 | |
| HLMMT20 | 8543 | 830074 | 1 - 206 | 15 - 220 | N55558, AA280889, AA095152, T90017, and AC008124. |
| HLMMR90 | 8544 | 575905 | 1 - 602 | 15 - 616 | T39190, and T40464. |
| HLMMK61 | 8545 | 532605 | 1 - 492 | 15 - 506 | |
| HLMMK50 | 8546 | 724485 | 1 - 196 | 15 - 210 | W42656, and AA077151. |
| HLMMF94 | 8547 | 811320 | 1 - 372 | 15 - 386 | R22164, AI248937, AI084822, AI249135, and AA897402. |
| HLMMF01 | 8548 | 916816 | 1 - 496 | 15 - 510 | AA837202, and Z82189. |
| HLMMF43 | 8549 | 714439 | 1 - 619 | 15 - 633 | AA716681, AI361749, N77694, H65481, AA005280, H64888, AA005196, N58327, AA747865, R94521, AA677973, AI032897, R93670, H73820, H54422, and AC012627. |
| HLMIY59 | 8550 | 878870 | 1 - 342 | 15 - 356 | AL120141, AF111168, AC005081, AL109798, AC004883, AL022476, AC005071, AC005796, AC009263, AC002369, AI049569, AC006064, AI050341, Z98946, AC002430, U62293, AC006312, AI109628, AC006211, AC005189, AC005736, AC007384, AC006023, M29930, AC005057, AC004638, Z81364, AP000689, M29929, AP000248, AC005317, Z68756, AL023553, AC002400, AC004019, AL031289, AC007151, AL031686, AC007011, AP001053, AC004990, AC005225, AC005049, Z93930, AC005562, AP00210, AC005089, AC005332, |

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| | | | | AL121658, AC004477, AC004491, AC004983, AF053356, AC000052, AC005015, AC000025, AF207550, Z81365, AC003029, AC002551, AC004656, U91318, AC003025, AC004686, AF088219, AL049874, AL034420, AC006275, AC004033, AL009181, AL096678, AC002992, AC004797, AL121653, Z99716, AC005921, AL133485, AL008582, Z93020, AP001054, AL031432, and AF117829. |
| HLMIG57 | 8551 | 835799 | 1 - 473 | 15 - 487 R81607, and U34932. |
| HLMHW80 | 8552 | 775382 | 1 - 432 | 15 - 446 H71175. |
| HLMHHT61 | 8553 | 742044 | 1 - 445 | 15 - 459 R70530, and AC006392. |
| HLMHHT49 | 8554 | 722191 | 1 - 448 | 15 - 462 T71093, T71030, AC004033, and AC007050. |
| HLMMHL66 | 8555 | 910804 | 1 - 353 | 15 - 367 AA313128. |
| HLMMHL03 | 8556 | 8566859 | 1 - 171 | 15 - 185 T49381. |
| HLMFU46 | 8557 | 718075 | 1 - 430 | 15 - 444 AA033893. |
| HLMFML88 | 8558 | 574812 | 1 - 744 | 15 - 758 AA884878. |
| HLMFG79 | 8559 | 974552 | 1 - 220 | 15 - 234 |
| HLMFE91 | 8560 | 531212 | 1 - 439 | 15 - 453 AA229869, AA368329, H48017, AI046031, H50031, AI348597, AA056206, H16875, AA704806, AI982994, AA374797, AI251809, H44137, AA303289, T61362, R79396, AI591334, F23268, AA985145, AI114755, AA322161, AW377926, H73306, AI246386, AW377843, AW377863, AW193523, AI871691, AA361244, AA833828, AA640823, AW190277, AA588099, AA526337, AA442480, AI254153, AI252828, N71545, H91047, AI571094, AW089016, F26285, AI281622, AA670108, T54173, M78137, T40210, W27084, AL047666, AI476460, AW377907, AW377921, AI954464, AW377912, AA205911, AA071151, AI811319, AI337065, AA218835, H86579, AI627868, AW390278, N30650, AW081503, AW390250, AI254937, AI816537, AA425924, AA325466, AA310354, AI815583, AI130709, AI536858, AI537995, AW071109, AA613189, AA018923, AA012829, N47820, AW148775, AI814682, AI291439, AA351868, AA836097, AI376454, AI298079, N76059, AA831997, AI018029, AI909640, M77900, AW390555, AA298783, F31634, AA584756, AW023376, AI831172, AW341955, AI475758, AI270149, AA424008, AW247089, AA287502, AA550989, R70884, AA320095, C06028, AW438551, AA565911, AI254440, AW377961, T48770, AW377862, AI251598, AA564753, AA700664, AI252933, AI469468, AA085554, AI223508, AI254658, AW440451, AA985194, H57324, AI241970, AW086319, AA282530, AI160875, AI024439, AI251996, AI252979, AI254626, AI284684, AW272640, AA668220, AI499376, AI251353, AA515723, R70883, AI251298, AI255012, AW438551, AA565911, AI254440, AW377961, T48770, AW377862, AI251598, AA564753, AA700664, AI252933, AI469468, AA085554, AI223508, AI254658, AW440451, AA985194, H57324, AI241970, AW086319, AA282530, AI160875, AI024439, AI251996, AI252979, AI254626, AI284684, AA372389, AI254673, AA650455, H30595, W38457, AW086334, N92697, H44537, AA071045, AC006211, Z82176, AL035551, AC004671, AC004671, U62317, AL031775, U66060, U66061, AF075037, AC000353, AC000353, AC005014, AB000462, Z68279, AP000689, AC007425, AL031120, AB003151, AC004216, AC004033, AC006948, AC007731, AC005500, AP000532, AC004611, |

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| HLMCJ55 | 8568 | 741635 | 1 - 425 | 15 - 439 | N77018, AI916826, AW236861, AA429686, and AL623392. |
| HLMBX91 | 8569 | 879359 | 1 - 846 | 15 - 860 | AA515440, AA601425, AW089625, AA659170, AA620554, T47745, AA516058, AI056526, AW102811, AL040382, T06754, AI110760, AA593471, AA523833, AA483204, AW440545, AI243789, AA961035, AA502104, AA633892, AW263415, AA640277, AF190465, U52112, AC005412, AC004019, AC003684, AL133163, AC004832, AC004223, AC007216, AC005696, U95742, AC004815, AC005231, AL031283, AC004966, AC005015, AC003101, AC004383, AC003695, Z97054, AC005081, AF109907, AP000045, AC0055808, AP000557, AC007546, AC009516, AC008101, AF001549, AC002470, AF196779, AL021391, AC002425, AC007308, AL031311, AC009247, AC007055, AC002350, AL049761, AC007686, AC002312, AF196969, AC005071, Z98941, AC007666, AL117258, AC007225, AC004841, AC008079, Z83844, AL035413, AC004491, AC007011, AL049780, AC006530, AC002558, AC006511, AC003043, AC002477, AF165926, AC005031, Z84466, AC005529, AC002070, AL080243, Z85986, AC002565, AF053356, AC003070, AL0224776, AL049709, U80017, AC002300, AC003037, AC005295, AC007731, AC004382, AC006088, AF038458, AL035587, AC005041, AL035659, AC004983, AL049869, AL035458, AP000555, AC005291, AC005102, AJ003147, AC005488, AC006312, AC007676, AF134726, AC002996, AC007151, AC004922, AC003982, AC007227, AC006241, AL096702, AC005520, AC005500, L78833, AC008044, AC002543, AC004878, AC000353, AC004895, AL133353, AL121652, AP000704, AC002375, AC004985, AL109758, AL035455, AC002492, AP000134, AP000212, AC004596, AC005291, AC005102, AJ003147, AC005488, AC005280, AC002476, AC000025, AL031276, AC004797, AC002394, AC005005, AC006064, AC006285, U91323, AC008115, AC005399, AC005519, AL049829, AL008718, AC004884, AF217403, AC005722, AC002301, AL139054, AF111168, AL049776, AL020997, AC005837, AC005839, AL023803, AL033392, AL109984, AC007537, AC005920, AC005480, AP000553, AC008372, AC005702, AC006449, AL034420, U47924, AC008116, AL049540, AC004659, AC007298, AC004887, AC005902, AP000030, AC005736, Z99128, AC006512, AC007226, AP000088, AL121655, AC007421, AL034549, AC005921, AC006480, AC005899, AC000052, AC002302, AP000011, AL035450, AC004685, AC005695, AC002365, AC016025, AB003151, AL035681, AC005778, AC004967, AC006132, AC006487, AL121658, AC006430, AC007919, AC006014, AC004253, AC005225, AL049697, AC004000, AP000115, AC002045, AC006023, AP000556, AL031681, AC004821, AP000039, AC004645, AC004858, AC006111, AC006001, Z82189, AP000501, AL008726, AP000047, AC004150, AL021155, AP000345, AL132712, Z97056, AC005821, U91326, AC005209, AC016830, AC007371, AC005004, AL031670, AC004882, AL096701, AL031289, AL121825, AL050318, AC007387, AP000065, AF047825, AC007688, AL121603, AC006071, AC023807, AC005180, AC004149, AC006121, AC005562, AC005940, and AP000248. |
| HLMBQ54 | 8570 | 730952 | 1 - 454 | 15 - 468 | HT2138, and AA594731. |
| HLMBQ48 | 8571 | 560848 | 1 - 400 | 15 - 414 | AA505108, and NT7195. |

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| HLMBN04 | 8572 | 615620 | 1 - 340 | 15 - 354 | T77272, F13388, and AF052103. |
| HLMAV56 | 8573 | 733708 | 1 - 540 | 15 - 554 | AA234263, and AA262980. |
| HLMAI82 | 8574 | 523694 | 1 - 100 | 15 - 114 | |
| HLMAE86 | 8575 | 852563 | 1 - 543 | 15 - 557 | AA056759, AI870884, AI184256, AA287354, AL048819, AA780049, AA658119, AW083033, AW131126, AA812201, AA523491, AI955653, AA102847, A1420177, AI658829, AI860578, AA058437, AW439401, AA700175, AA527995, AW439499, AI299102, AI471747, AA102846, AI767122, AA884538, AI859388, AI813491, AA004770, AA973515, AI016255, AA452810, H22945, AI686317, AW263434, AA074105, AA452925, H09535, N78501, AI865742, AA847674, AI916285, AA310886, AI263292, R41868, AI868055, AA809214, AW439033, AA994606, AA682833, AA004702, AA287405, and AI597574. |
| HLLCD85 | 8576 | 783454 | 1 - 515 | 15 - 529 | AI478306, AI161172, AA554537, W68698, AI380170, AI085355, AI796561, AI571389, T70262, AA188734, N92493, AW385352, AI216082, AA188572, AI141460, AI357387, AA489805, AA398636, AF108460, AF108461, AC020663, AF108455, and AF108454. |
| HLKDC76 | 8577 | 953502 | 1 - 1087 | 15 - 1101 | AA161515, AW250345, AW364752, AW248279, AA173349, AA410730, T093386, N288872, AA281341, N33896, AA312252, AA160094, T08124, Z45256, F07609, AA452741, R69813, AA380203, AA256741, N57212, Z43138, AI017337, F07095, T32695, W26853, T35905, AW204528, R14455, AI948689, AA682474, AI378863, AA378888, W27662, AI935695, AI928405, and AA910271. |
| HLKDB78 | 8578 | 773172 | 1 - 459 | 15 - 473 | AW298414, N39216, AW004711, AW051893, AI375134, AI917477, AI652977, AI291261, AW002993, AW003527, AI016680, AI676093, AA668759, R49090, AI351891, AI98667, AI203099, AA906803, AI356617, AI950955, Z40923, AI783643, AI418750, AI189132, AF069532, and Y16521. |
| HLKDB02 | 8579 | 918870 | 1 - 458 | 15 - 472 | T55231. |
| HLEAN30 | 8580 | 843294 | 1 - 442 | 15 - 456 | |
| HLCDAA7 | 8581 | 887375 | 1 - 619 | 15 - 633 | |
| HKBBBV11 | 8582 | 965170 | 1 - 528 | 15 - 542 | AA249141, AA317762, AA323439, R68885, AA657752, AA845804, AA443184, AL138096, AC006998, AC005406, AL022396, AC003029, AC004381, AP000008, AP000704, AL021367, AL031595, AC004106, AC008012, AC004087, AP000503, AF134726, AI034421, AI031274, AC002528, AC006536, AC006077, AI133246, AI034371, AI031733, X54486, AI031650, AC000052, AC004033, AC007731, AC005500, AL034345, AL022098, AC004832, AL079299, M26434, AC004231, AC004383, AC005243, AF099810, AC003101, AC020663, AC005354, AC005722, and AC005261. |
| HKBBP05 | 8583 | 928316 | 1 - 539 | 15 - 553 | AI436366, and H81947. |
| HKBAL06 | 8584 | 934160 | 1 - 527 | 15 - 541 | AI039905, AA826224, and AA911597. |
| HKBAJ12 | 8585 | 969644 | 1 - 648 | 15 - 662 | AI742235, AA742234, AA769592, AA828385, and AA804905. |
| HKBAB02 | 8586 | 918568 | 1 - 584 | 15 - 598 | AA524543, H28219, AA482728, and AC006486. |

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| HJUBA59 | 8587 | 888006 | 1 - 631 | 15 - 645 | AI971330, AI266060, AI870369, AA025208, N48096, AI673475, AW058505, AI864572, R08870, R38658, F10568, R08976, AI887853, AI400250, AI810202, and AA701175. |
| HJTRB51 | 8588 | 470587 | 1 - 486 | 15 - 500 | AA648882, and AA357310. |
| HJPDK80 | 8589 | 418622 | 1 - 902 | 15 - 916 | AA210877, AI797681, AI970134, W86482, AA070750, AA214621, AA977114, W86632, AA252120, AA902411, AA742986, AA242915, AA579700, AI468181, AA376316, AW015483, AA811628, AI928274, AI799954, AA040813, AA213789, and AF001549. |
| HJPDK57 | 8590 | 768274 | 1 - 686 | 15 - 700 | |
| HJPD116 | 8591 | 518105 | 1 - 343 | 15 - 357 | H29753, AA011703, AI341972, AA477868, AI813605, AA581094, AW027687, AW193238, AW193131, AA101402, AI565781, AI808069, AI475759, AI298622, AI356540, AI148214, AA156318, R50132, AA516279, AI347078, AI161316, W04405, AI635124, AA853039, R22251, N89768, AI248905, AA873149, AI149506, AW088640, AA701646, R39722, H42776, N95630, AI567992, AI591326, AI741983, R70062, W29112, R31096, AA399446, AW405653, AA011503, AW003643, AA628885, AA876220, AW62885, H54242, AW338832, AA353094, AI743581, AA453197, AI188538, W69801, AA282034, AA513733, AA374524, AI088462, H97805, W67620, AW068409, AW368994, AA034935, AA781354, AI933502, W23274, AW374523, R74587, H96595, AW374544, AA477759, AI052491, AA707033, AW051399, AW075651, R92048, AI583545, AI418411, AI888034, AI911293, AW167110, AI735231, AW167100, AI087842, R70016, AA430524, AA535808, H10643, AI828406, AI625243, AA335826, AI921041, AI375407, AW371892, AA775632, AI034439, AA011693, AI572578, AA861696, AI937166, AW075601, AA740399, AI720285, AW292885, H96596, AI525221, and AL035413. |
| HJPDE23 | 8592 | 574115 | 1 - 231 | 15 - 245 | |
| HJPDD82 | 8593 | 857401 | 1 - 990 | 15 - 1004 | AA455589, AI091855, AA988340, AA161359, H42568, R07607, AI015867, R07600, R07602, AA441957, AI936472, and AI291961. |
| HJPCW09 | 8594 | 536677 | 1 - 234 | 15 - 248 | Z44259, H07973, AB015348, AL137622, AL133072, AL133048, AL133040, AJ132440, AJ243706, and AF087481. |
| HJPCV54 | 8595 | 733607 | 1 - 575 | 15 - 589 | AA464262, AI885402, AI829944, AI921923, AW008540, AI074307, AI005213, AI479060, AI091416, AI684266, AW410641, AI924538, AW337968, AW170092, AW028819, AW242087, AA873160, AI362816, AA857987, AA745265, AI991184, AI222764, AI972124, AI161220, AI538743, AA609827, AI139793, AI336176, AI075402, AI829318, AA443894, AI609956, AI598268, AW194155, AI446095, AI096558, AA838514, AA431854, AA873436, AA864636, AW387090, AI241070, W79486, AA704924, AA872815, AI086820, AI139048, AI151109, AA937584, AI028016, AI805600, AI434504, AA770528, AI619841, AI872263, AA394128, AI090476, AW117881, AI348212, AI027063, AI355882, AI074246, AA488987, AI469710, AA576443, AI304813, AA832041, AA47555, W81550, AA460236, AA536177, AI351451, AI187174, AI368869, AA916469, AI635832, AA488766, F37944, AA724420, AI187204, AI359194, AW387107, N95198, AI827052, AI961866, AA632947, AI346208, AI285018, AW169451, AA431853, AI266343, AA897757, N54144, W52694, AW105713, |

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| | | AA468707, AA961789, AA973012, AI365011, AA975671, AI860610, F26639, N93383, AI613224, A1276959, AW244117, R72627, AI537125, AA587714, N95718, AI862935, AW196747, AW192153, AW006966, W37484, AI248658, F33861, N23034, AA856643, AW262254, F25207, AI620538, AA931570, AA635625, AI247720, AI371332, AI749096, AW245621, AW300803, AA305218, AA531066, R01124, AA971776, T47328, AA635797, AW438489, AI081520, D19664, H20537, AA092490, H52662, AA551762, AA555138, W25402, AA458500, AW079734, AA57751, AA687321, AI864873, AA622357, H61205, R08599, T96113, AI698803, AA525442, AA897375, AA531532, AA213974, R44367, T30367, R61784, AI865436, AA588105, AW303695, AA477599, AA465145, N83457, AA888543, AA402134, AA456798, AA402983, AI014631, AA885559, AI560327, AA282885, R72698, AI219331, AI718876, AI301761, AA834496, AA350271, and AI002308. | 15 - 748 N95260, and AI668689. |
| HIPCS4 | 8596 | 871807 | 1 - 734 |
| HJPBP22 | 8597 | 577455 | 1 - 133 |
| HJPBA04 | 8598 | 615585 | 1 - 472 |
| HJPAZ91 | 8599 | 882668 | 1 - 523 |
| HJPAY56 | 8600 | 909242 | 1 - 221 |
| HJPAX11 | 8601 | 967599 | 1 - 543 |
| HJPAT79 | 8602 | 781697 | 1 - 311 |
| HJPAG38 | 8603 | 709103 | 1 - 425 |
| HJPAAP60 | 8604 | 586675 | 1 - 523 |
| HJKSC56 | 8605 | 578366 | 1 - 459 |
| HJBDM21 | 8606 | 793381 | 1 - 437 |
| HJBDSL70 | 8607 | 757378 | 1 - 697 |
| | | | 15 - 451 15 - 711 15 - 325 15 - 439 15 - 537 15 - 235 AA205091, and AC003002. AI985517, and H75687. AA278629, AA215509, and AA031467. N23069, N25298, N25305, and AA356922. AA044789, AW371891, AA297755, AA044810, AI150008, AA993400, and AI420327. |
| | | | AA306768, T75462, R13593, F13160, AA479890, W22183, C14389, D80022, AA305578, D80043, D59610, C14331, D58283, D80241, AW177440, D50995, D51423, D59467, D80195, D59859, D51799, D80166, D80227, D59619, D51022, D80210, D80391, D80164, D59275, D80240, D80253, D59787, D59502, D81030, D80212, D80196, D80188, AW177501, D80219, AW177511, D59927, C15076, D80269, D80024, D57483, D80038, D80366, C14429, AA305409, D50979, D59889, D80193, AA514188, D80378, D51060, D80268, AW17893, T03269, AW352117, D80045, D81026, D80248, D80522, AW179328, C75259, C14014, D80251, AW378532, AA514186, D80133, AW360811, AW178775, D58253, AW377671, D51250, AW178762, AW352158, C05695, AW375405, AW360844, D80134, D80132, AW178754, AW177505, AW366296, AW360817, AW375406, D80247, AW378534, AW352171, AW179332, AW377672, AW179023, AW178905, D80302, AW352170, AW179024, D59373, D80168, AW377676, AW352120, F13647, AW360841, AW179020, AW178909, AW177456, D80439, AW178906, AW177731, AW178907, AW179019, AW179018, C14407, AW178971, D51079, AW378540, C14227, T11417, D81111, A1905856, AW179004, C14298, AW179329, |

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| HJABQ75 | 8623 | 567249 | 1 - 1088 | 15 - 1102 | <p>AA309844, AL037632, AL040921, AA601355, AL138265, AL608771, AL135377, AA526787, AI963600, AW131249, AA737309, AA577824, AI685198, AI357778, AI110760, AL120269, AA837677, AI924251, AA507168, U51704, AL138455, AI951863, AW188427, AW088224, AL045053, AW055226, AL037683, AI334443, AA587604, AI859742, AA586458, AA484696, AI053790, AA837740, AA838140, AW162887, AI567674, AW406447, AI963714, AL038705, AI929738, AA456937, AW102811, AA223932, AI654588, AA640277, AL042906, AW085751, AW303196, AA601326, AI963221, AI471543, AW301350, AI284640, AW089927, AA632281, AI204309, AL041690, AA587256, AL046409, AI016704, AA577906, F28204, AI625244, AI133164, AI696962, AW408643, AW274349, AL042905, AA723287, AW021583, AI270117, AI872227, AW072923, AI014358, AA121815, AW130036, AA722198, Z78385, AL120483, AA487872, AA743907, AI246796, AA578832, AI679294, AI110770, T63272, AW008212, AW189303, AL048969, AI445582, AW069769, AA101689, AW407578, AW276435, AA743960, AW089625, AI431303, AI305766, AW247819, AW069819, AI687343, AI375542, AW440545, AA490183, AW193265, AW243793, AL042310, AI499134, AW103509, AW265585, AA078849, AW419262, AI972203, AI679871, AW245747, AA665449, AI610840, AI963720, AA984166, AW406162, AA603445, AA908687, AA812139, AL042853, A055169, AA643454, AA643457, AI623720, AL046205, AC007191, AC002430, AC009516, AC007384, AL049766, AC005500, AL022163, AI034423, U96629, AP000552, AF053356, AC004491, AL121658, AC004987, AC007731, AL022315, Z98044, AP001053, AC004966, AJ246003, AC005527, AC002059, AL031281, AC004913, AF190465, AC005695, AP000504, AC006511, AC004686, AL021453, AC009247, AC007371, AC006285, AC005736, AP00692, AC004832, AC005324, AL135744, AC005914, AL049569, AC004638, AL031311, AC007308, U52112, AC02310, AL096776, AL022322, AC020663, AC002470, AC000026, AC005696, AC005409, AL133245, AL022302, AC005529, AC005015, AC005689, AC004963, AC004033, AB023049, Z83844, AC004895, AC006449, AC000025, AL031283, AC006013, AC004690, AL022238, AL035659, AC005632, AC005081, AL031577, AC007993, AL121653, AC002544, AC005531, AC005520, AC005776, AP000555, AC005180, AL049776, AF129756, AL022323, Z85987, AC005261, AB003151, AC005295, AC004253, AC006111, U91326, AL132987, AF111168, AC004814, AC005829, AC003007, AC007057, AC016025, AC006581, AC004150, AC004805, AL031680, AL031432, AC004019, AC007541, AC002045, AL031662, AC000353, AC002565, AC005004, AC004650, AC005913, AF111167, AC004878, U85195, AL133243, AC002984, AL096701, AL023553, AC009509, AF045555, AC007536, AP000556, AC002476, AC006501, AC005057, AL022316, U62317, AC005387, U91321, AC004821, AC003101, AL024498, AC000134, U80017, D87675, AC006430, AC002115, AC00035, AC005940, Z98742, AL133163, AE000658, AC006312, AC004477, AC004596, AL008719, AC002350, AC003104, AC007676, AL049830, AF196969, AF196779, AL022721, AC016830, AC005920, AC005332, AC005740, AC004217, AP000115, Z86090, AI023575, AC007227, AC006195, AC006441, AC004583, AL109798, Z82244, Z98752,</p> |
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| HJABK84 | 8624 | 783237 | 1 - 657 | 15 - 671 | D80269, D80038, D80164, D59502, C14389, D80045, AA514188, D59467, D80212, C15076, D80166, AA309665, AA210819, D80022, D80195, D80227, D81026, D80248, D80439, C14331, D59787, D51423, D51799, D80253, D80043, D81030, D80302, AA305578, D80219, D80196, D50979, D80024, D80366, D80188, D80522, D59927, C14014, D57483, D59610, D80378, D51060, D80133, D51022, D59889, AW377676, AA514186, D50995, AW360811, AW377671, C14429, AW177440, D80268, D80251, D80241, AW178893, D51759, T03269, AW375405, AW360844, D80247, D80949, AW178906, AW179328, AW366296, AW177501, AW177511, AW360817, C75259, AW375406, AW378534, AW352171, AW179332, AW377672, AW179023, AW178905, AW378532, D51103, D80157, D80132, AW177505, C05695, AW360841, D59373, AW178775, AW178909, AW352170, AW177731, AW178907, AW178762, AW178754, AW179019, AW179018, AW179024, AW352117, D51250, D80134, AW179020, C06015, D58253, AW177456, AW367967, AW179329, AW369651, AW178980, AW177733, AW378528, AW178908, AW352158, AW178971, D59695, AW176467, AW178983, AW352174, AW179017, AW179004, AW179009, T48593, AW179012, AW178914, AW378543, AW378525, AW352163, D59503, D80168, F13647, T11417, AW178774, D59653, D59627, AW352120, D80258, T03116, AW178911, AW177722, D58246, AI910186, AW177728, C14227, AW360834, D58101, D80064, H67866, AI525923, C14298, D45260, AI905856, D81111, C14407, C14077, AW178781, AI525227, AW378540, AW367950, AA809122, C03092, H67854, D59317, AW177723, AW177734, D51213, AW178986, AI535850, D45273, AI535686, C14344, Z21582, AI525917, AW177508, D80014, D59551, C14973, D59474, AW378533, D51221, AW177497, D60214, C14046, AI525920, D60010, T03048, AI525925, AA514184, AA285331, AI525215, D51097, AI557774, H67858, C14957, AI557751, AW378539, AI525242, AI525235, AW179013, AI525237, C13958, AW178759, AI525912, AW378542, D51066, C16955, C05763, Z33452, T02974, |

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| HJABB93 | 8626 | 791435 | 1 - 716 | 15 - 730 |
| HJAAZ32 | 8627 | 699727 | 1 - 371 | 15 - 385 |
| HJAAV85 | 8628 | 783412 | 1 - 215 | 15 - 229 |
| HJAAAR02 | 8629 | 921105 | 1 - 279 | 15 - 293 |
| HJAAQ07 | 8630 | 954263 | 1 - 447 | 15 - 461 |
| HJAAAC22 | 8631 | 779388 | 1 - 449 | 15 - 463 |
| HJAAA83 | 8632 | 928841 | 1 - 660 | 15 - 674 |
| HILBQ12 | 8633 | 971556 | 1 - 346 | 15 - 360 |
| HILBC52 | 8634 | 906873 | 1 - 320 | 15 - 334 |
| HILBC17 | 8635 | 667204 | 1 - 465 | 15 - 479 |
| HHEZZ74 | 8636 | 934486 | 1 - 1616 | 15 - 1630 |
| HHEZT12 | 8637 | 969437 | 1 - 438 | 15 - 452 |
| HHEZO92 | 8638 | 942859 | 1 - 881 | 15 - 895 |
| HHEZN61 | 8639 | 973136 | 1 - 698 | 15 - 712 |
| HHEYE64 | 8640 | 973232 | 1 - 661 | 15 - 675 |

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| | | | | AL134533, U46345, AL042896, AI142139, AL042965, AL042544, AL043029, AL042450, AL042542, AL042984, AL119464, AL043003, AL119304, AL042551, AL021877, AB026436, AR054110, AR060234, A81671, AR066494, and AR069079. |
| HHEX005 | 8641 | 930794 | 1 - 1666 | 15 - 1680 |
| HHEWX08 | 8642 | 974405 | 1 - 516 | 15 - 530 |

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| | | AC003684, AC004991, AP000275, AF038458, Z93241, AC007384, AC002365, AL133245, U91323, AC006376, U18399, X55931, U18391, X55927, U18392, U57006, U18394, U18395, X55925, X55922, X55930, AP000193, AP000105, AP000037, X54179, AP000282, AF015723, AL031431, AC008072, U18390, X55932, AC006365, AL035450, X55933, AC010170, AC004041, AC004076, AC003080, AL121892, AP000049, AC007590, AC004514, AL034549, AL008720, AC007298, AL008706, U85195, AC004033, AC007253, AL035249, AC005157, Z81450, AP000040, AP000108, AL031659, AP000311, AC000091, AC002991, AC007285, AL049839, Z86061, AC006204, AC006552, U04355, AL109985, Z95704, AC005873, AC006948, AC006006, AC002347, AL035460, Y10196, AC006312, AE000658, AC004603, AC004990, AC002470, AC007934, AL049873, AC004832, AF124523, AC000035, AL135746, AC004948, U18393, AL020995, AL050338, AL008718, AC004638, AC004796, AC004061, AC007243, AC007032, AL022721, AC006137, AC007652, AL031281, AC003950, AC007845, AC004967, AC008009, AL121653, AL080243, AF067844, AC007225, AC005089, AL035671, AC007406, AC004024, AL023882, AC002429, D87675, AC004802, AC008015, Z75741, AL021878, AC003048, AC006292, AP000090, U67801, AC016830, AC005180, AL022476, AC004070, AC004816, and AC005288. |
| HHEWX06 | 8643 | 933879 1 - 256 |
| HHEWT49 | 8644 | 973142 1 - 407 |
| HHEWS01 | 8645 | 914746 1 - 604 |
| HHEWQ10 | 8646 | 963039 1 - 259 |
| HHEWM53 | 8647 | 973150 1 - 488 |
| HHEWG06 | 8648 | 933874 1 - 308 |
| HHEVZ06 | 8649 | 933891 1 - 487 |
| HHEUUT6 | 8650 | 906956 1 - 532 |
| HHEUP68 | 8651 | 973215 1 - 687 |
| HHEUL05 | 8652 | 931045 1 - 573 |
| HHEUD79 | 8653 | 774157 1 - 599 |
| HHETR81 | 8654 | 836730 1 - 705 |
| HHEETP07 | 8655 | 952217 1 - 365 |

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| | <p>AA664604, AI084012, H58386, N85991, R42913, W60516, T65997, AW405850, N83375, AW403720, AL120008, AA579278, AI254338, AA747375, AI821044, AA077223, H72688, AW342042, R59868, AW419262, T47739, AA714595, AA557879, AI338509, AL046409, AA747889, AI250747, AA909004, AI223735, H78150, R64126, AI744949, AW193500, AA805841, AA431350, F32668, AA515435, AI792130, AI205126, R44841, A1628288, AI792337, AL119259, AA705118, AA515224, AW438916, AI824562, W92302, AA669961, AA113367, AA228264, AI082510, AI887443, AA317170, AW074398, AA640272, AA595841, AI291823, AL119123, AI312790, AI039809, AI336054, H22977, AA327323, AA095511, AI355587, AA077817, AI792108, AL120343, AI830390, AA904137, AW383952, AA507837, AW088058, AW327961, N76908, AI446205, AI312149, AW338417, AW327960, T57604, AA377730, AW270768, H92369, AI926846, F37169, AI924251, AW008074, AI133862, AI358501, AA610491, AI291037, AI863399, AA503258, AW27174, AA657741, AW271917, AA533408, AL040462, H98660, AI783911, F36373, AI138242, AI929531, AI038990, AI708005, AW193493, AI446518, AI049986, AW406447, H52622, AI932884, AW236342, AI281903, AI963095, AI620585, AI471462, AA662431, AL038901, AI370878, AL120269, AW162049, AI813522, F32710, AI370475, AI925321, F23327, R72392, F29989, F00320, AI110770, AA570416, AW080134, AI753365, AI590406, AI064703, H09327, AA618158, AL041733, D58782, AW193609, AW169537, Y14768, AP000505, AF129756, AC005914, AC005237, AC007014, AC004583, AF086558, AC006130, AL034420, M21533, AB014080, AC006139, AP000514, AC002365, AP000049, AP000116, AP000311, M19822, AC002367, AL021937, AC008372, AL022165, M87914, AC005361, AL035684, AC006088, AC003035, AC007686, AF020503, AC007395, AC006354, AC012085, AL022329, Z84479, AC006128, AC005216, AC008071, AC003668, AC005104, AL031666, Z93016, AC008163, AC006023, AL078595, AC000092, Z99043, AC006138, AL031666, Z93016, AC008163, AC006023, AL078595, AC000092, Z99043, AC004168, AL031779, AC004079, AL035410, AC005406, AC007666, AC002310, AC000052, AC003087, AC004180, AC006254, U85197, AL050321, AL021878, AC002040, AC004982, AL031224, AE000660, S41998, AC001227, AC004517, AC002101, AL032822, AC004827, AC007023, AC007436, Z83819, AL022327, AC002301, AL035587, AL031589, AL031734, AC000113, AC006111, AC004539, AL049546, AL022312, AC005844, AC005037, AC002364, Z69666, D63861, AC004990, AI021546, AC004467, AP000359, AC004016, Z86061, AL034548, AC007688, AC005152, AL022396, L17418, AC007091, AC006257, AF042091, Z99495, AC005258, AL078596, AL031133, Z98742, AC002543, AL035668, AC005327, AC007225, AP000567, AL033375, Z84490, AC005319, AL132712, AL031296, AC009501, M87918, Z82201, AC004835, AL049733, AL035415, AF111168, AC002558, AL133243, AI033376, AC005899, I59642, Z75746, AC005346, L39891, AC003089, AC003108, AC008125, AC016830, AL008718, AL031312, AL049838, AL021153, AC005608, AP000656, AF006501, AC004475, AC003098, AP000507, AC005911, AL078477, Z85987, AL034379, AC005164, AC004841, AL078593,</p> |
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| | | | | AC005017, AL035690, AL031427, AC006017, AC006031, AC004882, AC008126, AC005696, AL133238, AC005191, AC007784, Z85996, AC006312, D84394, AC005529, AC005146, AL022397, AC006597, U51022, AF18024, AC000025, AL049766, AC007486, AL035361, AC005257, AB014077, AC005778, AL034430, AC007999, AC005365, AC004541, AL080317, AC009247, AL049837, AL022323, Z98950, S75201, AC004191, AC007387, AC005539, AB011542, AL049632, AF084941, AC006162, AC000392, AP000251, AP000030, AP000211, AP000133, D87009, AL109627, AC009286, AC003003, AC005324, AC004887, AC005081, AF069291, AC005015, AF117829, AL022143, AC007617, AJ223364, 151997, Z82181, Z49866, AC006277, AP000300, AP000113, AC004408, Z93241, AC005754, AL121653, U91326, AC002544, AP000553, AC009516, AC005089, AC004770, AC005725, AP000445, AB020866, and AF110465. |
| HHETN89 | 8656 | 786361 | 1 - 674 | 15 - 688 |
| HHETN03 | 8657 | 923009 | 1 - 630 | 15 - 644 |

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| HHEQH22 | 8668 | 723305 | 1 - 357 | 15 - 371 | H84643, AA688153, AA481647, A1869837, AW361991, AW029303, AA481414, N34803, AA857012, AI360148, AC006050, AF073926, AF047438, and U49841. |
| HHEQC89 | 8669 | 786603 | 1 - 474 | 15 - 488 | AA210815, and AI939420. |
| HHEQC26 | 8670 | 679505 | 1 - 514 | 15 - 528 | AA203563, and AC005164. |
| HHEQB59 | 8671 | 738866 | 1 - 735 | 15 - 749 | AI003508, AI733556, AI792286, AI792327, AI696480, H28915, AI810218, AA679636, AI924520, AW105710, AI018653, AA678645, AA825445, AL078475, AP000025, AP000026, and AL050302. |
| HHEQB23 | 8672 | 675500 | 1 - 145 | 15 - 159 | R94836, and AA577023. |
| HHEPW95 | 8673 | 588266 | 1 - 274 | 15 - 288 | |
| HHEPW40 | 8674 | 588265 | 1 - 363 | 15 - 377 | |
| HHEPW11 | 8675 | 966789 | 1 - 347 | 15 - 361 | AA487512, AI697235, AA382130, AA528634, AW316599, H62537, AI345704, AI345794, AW161459, AW161879, AI191343, AI003797, AA936548, AA526032, AW084431, T92788, AI360690, AA856958, AI808173, AI114739, AI446500, AA650108, AI978931, AI86224, AA745570, AA093114, AA299422, R76735, AI697242, AI690474, AI583677, AI692245, AI697239, AA507631, AA494253, AA458752, T06876, AA789098, AA069926, N25034, AA554389, AA668945, F28756, AL047645, AA218835, AI922583, AI623741, AA350375, AA360015, AA209436, AI298557, AA907192, AA808843, AA569494, AA808847, AI358514, AA652675, AA886227, AL045107, AA826006, AA148800, AA148531, AI749306, AA773302, AA320722, AI689198, F33184, AA482693, T90014, AI026710, AI829381, H78921, AA666327, AA493618, AA338216, N38803, AI753549, AI934548, AA578245, AI537023, AI246386, A1560228, AW089952, AI753969, H78281, AI580018, T87818, AA778826, AI190247, H24953, AII50848, AW008231, AW377907, AW377921, AI922805, AW377912, AA303770, AI524712, AI079869, AI929738, AI686563, AW163602, AW162887, AW390555, AW162662, F18394, AI274684, AL045451, AW390278, AI139971, AC007055, AC005844, AI049748, AP000432, AC004217, AC004225, AL034420, AC002312, AL034400, AC016831, AC005585, AC001228, AI096801, AC005531, AI096773, AC005215, AC004858, AC007444, AC004004, AL109839, AI1009031, AC002326, AC004477, X76775, Z96104, AC002470, Z93023, AC005516, Z95152, AI132987, AC004997, AF109907, AC000353, AC005280, AC004854, AC005534, AL034371, AI135744, AC007911, AC008119, AC007917, AC003043, AC005200, AC005553, AC007786, AC004999, U80017, AC006071, Z98950, AC004495, AC007964, AC007370, AC005318, AC005409, AL031681, Z97053, AC006101, AC004925, AF017104, AC007182, AC000379, AC004257, U41384, AC005027, AL049780, AC007226, AL121852, AL022322, AF190465, AI135745, D86992, AC006505, M20902, AC009501, Z49154, AF090931, Z98754, AL133371, AI021578, AI133396, AP000066, Z73359, AI035072, AL121892, AC004638, AC005261, AC005736, D88270, AC005902, AC004234, AC004821, AI035660, AL049631, AC006432, U73627, AF061779, AC004923, AC007151, AC004939, AC005839, AC002073, AC005332, AC000087, AC006441, AC008072, AC000071, AC004960, AC004216, AL121655, AL049709, |

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| HHEPT05 | 8676 | 912266 | 1 - 2504 | 15 - 2518 | |
| | | | | AW069598, AW131635, AI669446, AI669022, AI968479, AA628971, AA928346, AA828393, AI245982, AW305033, AI399953, AI478692, AW276504, AA653293, AI082346, N57490, AW264574, AA583342, W72055, AI887350, AW268530, N68244, AW130656, AW131233, AI819853, AA253240, AA167004, AA491296, AA171704, AW273451, AA890295, AI431699, AI061332, AI373431, AI262352, AW196819, AI253535, AW243718, AI831015, AA683296, AA846151, AW316619, AI369009, AI942247, AI302629, AI379246, D29081, AA59882, AA722978, AI128087, AW023413, AA287414, AI433493, AA720906, AW130662, AA463506, N77877, AI253623, AA463439, H24406, AI924613, AW192204, AA397433, AA989368, R46595, R24070, AW089044, W05834, T15472, AI265964, T65426, AI749288, AI923627, AW020937, AA8555107, AI378942, AI276045, Z45625, T16609, F09478, AA364112, AI984324, AA961110, R77605, AA402444, AA834097, R58443, F05807, R24122, AA650077, AA658584, AI971866, AA327416, R77606, AA171628, H22552, H43755, and AA720957. | |
| HHEPT03 | 8677 | 923410 | 1 - 1057 | 15 - 1071 | |
| | | | | AI138265, AI679782, AI687343, AL048925, AA181773, AL042753, AA749158, AI963720, AI431303, AI696962, AW193265, AW327868, AW303196, AI279417, AW274349, AA847499, AI623720, AI696955, AW301350, AI270117, AI345654, AL044940, AI801482, AI038705, AA581903, AI281881, AI754253, AI037714, AI613280, AI041690, AI312309, AA515728, AA720702, AI138455, AW085790, AI986165, AA490183, AA846935, AI061313, AI119984, AA101689, AA470969, AA491814, AW438643, AW276827, AA577906, AA569471, AW088202, AA704393, AI192631, AA723017, AI570261, AI610920, AI249997, AI270559, AA857486, AI457397, AA587604, AI635440, AA621858, AI110770, AW408717, AI559705, R98218, AI679045, AA469451, AA679642, AI246119, AW072587, AI610607, AI962050, | |

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| HHEPG62 | 8680 | 877268 | 1 - 814 | 15 - 828 | AA410428, AA425770, AA702540, AA256277, R67851, Z38978, R41246, H41898, Z19699, D62705, AI541468, AL133113, and A75286. |
| HHEPG59 | 8681 | 925436 | 1 - 529 | 15 - 543 | AA521097, AW268594, AA917092, AA703191, AI580848, AL043152, AW002653, AI146275, AI275894, AI611051, AA029718, AI69998, AI092449, AI242378, Z38987, AI760326, T81076, AA248753, AW393578, AW393562, and T81124. |
| HHEPF21 | 8682 | 956241 | 1 - 463 | 15 - 477 | AI650932, AW183419, and AI078600. |
| HHEOG81 | 8683 | 588155 | 1 - 353 | 15 - 367 | N57024, AA412609, AA446493, AA446313, AA412274, AA417161, AI206458, AI024531, AI027971, and N29332. |
| HHEOA63 | 8684 | 744995 | 1 - 521 | 15 - 535 | T75517, R99167, and T99393. |
| HHENY02 | 8685 | 919775 | 1 - 361 | 15 - 375 | AA936859, R08108, and AL031120. |
| HHENW11 | 8686 | 887661 | 1 - 389 | 15 - 403 | AA216412, T99179, AI285753, AI924872, AA442105, AI174766, AA635739, AI1250083, AI311684, AI805363, AI254279, AI133164, AA729282, AA491449, AA489996, T60940, AA420877, AA490183, AA420452, AI133297, AI223604, AI041619, AI310780, AA493695, AW080777, AC005620, AP000432, AL049795, AC005011, Z97054, AC006079, AC003071, Z95331, AC002073, AC005102, AL121658, AC016831, AC007227, AI1021546, AC007938, AC005666, AP001053, AP000556, AC006137, AC006430, AC006538, AC006531, AC007688, AC016027, AC007564, AC008055, AC005291, AC003030, AC005244, AC002539, AL022165, AI096701, AP000252, AC004562, AC009399, AC005067, AI049569, U85196, AC006312, AC004263, AP000212, AP00134, AC004491, AC012085, AC008079, AP000043, AP000111, AL035420, AC004796, AL008715, AC007057, AC005899, AF039907, AL031680, AC004999, Z93023, AL021707, AC002126, AC005410, AC006241, AC004234, AL035410, AL049631, Z93930, AC005484, AL024474, AP000251, AC005380, AC006101, AC004149, AC004531, AC006131, AB003151, AP000688, AC004882, AP000300, AC005874, AF134471, AC005412, AE000661, AL035587, AC005722, AC004815, AJ003147, Z98051, AC016830, AL022724, AL122021, AC005480, AP000689, AL031577, AC005049, Z33826, D84394, AC007567, AC005200, AP000030, AF124523, AC004985, AC005921, AC005592, AP000045, AP000113, AC007566, AP000692, AC006511, AC004056, AC005940, AF024533, Z97056, AC004876, AC005189, AL031588, AL031685, AL031848, AC002464, AC005821, AC005225, Z97205, AC005004, AC008067, AI049779, AL031432, AC003982, AC005088, AC002404, AC004910, AC007676, AL008583, U62317, AL049872, AC002119, AC009247, AC005837, AC006581, AL031584, AC005015, AL078584, AL031666, U80017, AC006211, AI009181, AC004408, AC007066, AC005971, AL021918, AC004832, AC004067, AL021578, AL034419, AC007686, AF038458, AC006948, AL135783, AL008582, AC006011, AC004953, AC004973, AL022323, AC007792, AC005257, AC005988, AL031274, AC002429, AC004801, AI050318, AC006039, AC004859, AP000065, Z93241, AC005630, AC005280, Z82171, AI022316, AC006509, AC007040, Z99716, AC002477, AC002094, AF049895, AC005839, U52111, AC006126, AC004383, AL096791, AC005300, AC006449, AP000112, AP000044, |

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| HHENQ08 | 8687 | 959262 | 1 - 431 | 15 - 445 |
| HHENK21 | 8688 | 858290 | 1 - 798 | 15 - 812 |
| HHENJ29 | 8689 | 690576 | 1 - 488 | 15 - 502 |
| HHEND53 | 8690 | 728111 | 1 - 500 | 15 - 514 |
| HHENC71 | 8691 | 757844 | 1 - 530 | 15 - 544 |
| HHEMZ66 | 8692 | 586737 | 1 - 432 | 15 - 446 |
| HHEMW78 | 8693 | 773507 | 1 - 725 | 15 - 739 |
| HHEMV01 | 8694 | 916281 | 1 - 262 | 15 - 276 |
| HHEMQ68 | 8695 | 752326 | 1 - 140 | 15 - 154 |
| HHEMQ48 | 8696 | 493733 | 1 - 534 | 15 - 548 |
| HHEMN37 | 8697 | 708468 | 1 - 205 | 15 - 219 |
| HHEMK77 | 8698 | 772115 | 1 - 255 | 15 - 269 |

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|---------|------|--------|---------|----------|---|
| HHEMK26 | 8699 | 681595 | 1 - 458 | 15 - 472 | AC004047. |
| HHEM191 | 8700 | 789443 | 1 - 572 | 15 - 586 | R38756, AA169642, AA807905, AW021148, AA746636, W76332, AA041299, W72247, Z40683, AW054820, Z41322, AI089582, AI138777, AW151097, AA041351, AA705107, and Z95152. |
| HHEM169 | 8701 | 755006 | 1 - 445 | 15 - 459 | AW197056, AL042891, AA650218, AI359687, AA658343, AI421102, AI809745, AA226084, AA653852, AL080243, AF196779, AL096701, AL121603, AI031291, AC005520, AC005562, AC005081, AC005037, AC003071, AC005102, AC006441, AL049776, AC002369, AC005844, AP000354, AC005057, U80017, Z93017, AL132712, AC006312, AC005071, AC004883, AC005015, AC006057, AC006211, AC016027, AC004859, AC006251, AC007227, Z83840, Z97630, AL049569, AF165926, AC002544, AC004662, AL024507, AC006285, AC007707, AL031685, AC007537, AF005356, AC005011, AF001550, AC007193, AL022316, AC020663, AC004966, AC005484, AF001552, AC007225, AC012384, AI049839, AC016830, AC007688, AC002395, AC004878, AC006946, AC000052, AL008582, AC004815, AL021453, L44140, AL021391, AC007637, AP000248, AL109952, AC005829, AC005786, AC002301, AP000503, AC010205, AC004796, AC004491, AC004019, AC005049, AC007546, AL034420, AF047825, Z83844, AC004814, AC008372, AC004953, AC003101, AP000355, AL022326, AC007686, AC005225, AL109984, AC005722, AC006014, AP000065, AF134726, AL023575, AC004887, AC004084, Z98941, AL031584, AL022315, AC000026, AC002350, AC015853, AC005622, AC006059, AL022476, AC000025, AC002073, AC005529, AL033527, AC004382, AL050318, AF111168, AC005527, AL022336, AC004832, AP000692, AC005031, AC005488, AC003010, AC002059, Z84487, AC008040, AC002119, AL031255, AC002394, AL133382, AL031591, and AC006121. |
| HHEM156 | 8702 | 469030 | 1 - 445 | 15 - 459 | AI133448, AI1339436, AA401945, AL044340, AL037425, AI014656, AA577824, AI216990, AI569363, AA179163, AI249880, T74524, AW079809, AA524229, AC004491, AL050306, AC005921, AC008033, AC007686, AL031255, AC002094, AC002470, AC005088, AC005796, AC005859, AC005037, AC006241, AL080243, AL049776, AC005844, AC016026, AC005231, AC004859, Z84466, AC002352, AL049540, AC005527, U91323, AC002288, AC007371, AC004707, Z93241, AC007731, AF038458, AC005899, Z82206, AC007057, AC005005, AC004985, AC004019, Z93023, AF030453, AC002300, AC005358, AC002425, AP000557, AC005881, AP000553, AC005519, AC005529, AC004983, AC007263, AC005332, AL031276, AC005940, AC006001, AL096773, AC004821, AC006509, AF207550, AC003071, AC005911, AC005484, AC007308, U47924, AC005520, AP000011, AC005488, AC005841, AL049758, AP000133, AC008372, AC002350, Z98752, AC009516, AL024507, AC006430, AL021707, AI049779, AC005412, AC002349, AC004922, AC002044, AC007226, AC006538, AC005514, AI022238, AC005011, AC000025, AC002400, AC005377, U91326, AC005015, AL031058, AI022336, AP000211, AC005180, AL031283, AC002565, AC005666, AC007685, U91322, AC005602, AL024498, AC012384, AC006251, Z98941, AF165926, AL031228, AC005089, AF030876, AP000555, AL133163, AL035249, AP000512, AC005409, AL022320, AL035086, |

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| | | | | AC003029, AC004453, AL008582, AL050318, AP000042, Z99127, AC007565, AF053356, AL049569, AC005014, AL031311, AC007358, AC006023, U78027, AL031681, AC004167, AL049795, AC004000, AP000513, AC005049, AL031985, AC005289, AC007216, AF001549, AP000030, AL133245, AL109628, Z98051, AC002059, Z98750, AF134726, AC005823, AC002096, Z83844, AL023807, AC002073, AJ003147, AC005500, AC005071, AC005393, AL035072, AC005261, AF031078, AP000110, Z93017, AL049872, AC007276, AF111168, U95742, AC006160, AL031589, AC005081, and AC005902. |
| HHEM09 | 8703 | 625459 | 1 - 448 | 15 - 462 |
| HHEMG02 | 8704 | 917366 | 1 - 705 | 15 - 719 |
| HHEMG01 | 8705 | 916297 | 1 - 284 | 15 - 298 |
| HHEMD56 | 8706 | 733353 | 1 - 400 | 15 - 414 |
| HHEMC41 | 8707 | 927255 | 1 - 457 | 15 - 471 |
| HHEMC10 | 8708 | 969380 | 1 - 1813 | 15 - 1827 |

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| | | | | AR007512, A63072, AR028564, A49700, A25909, AR031375, A48775, A23998, AR068507, AR068506, A86792, A58522, A83642, A24783, I44516, A58525, A24782, A83643, A49045, A91750, AR009152, AR009151, AR000006, I60241, I60242, AR000007, AR028672, E16678, A58526, A82653, AR038066, A58524, I50882, A58521, A91753, E16636, E00955, I66488, A20702, I66489, I43960, AR021440, A58523, A49987, A93016, AR020969, I01971, AR027070, E00974, I84555, E00954, E00952, E00953, E00955, I08049, I66488, A20702, I66489, I43960, AR021440, A49987, A37074, A37075, E03165, E022221, A10359, E01614, E13364, I12243, I12244, A23997, A49702, A10360, A93016, A13038, E02679, E01718, E02003, A899633, E00954, E00955, A42484, A42481, A52326, E02001, E13740, I09342, E01718, E02104, E02098, A29289, A42484, A42481, A52326, E02001, E13740, I09342, E02291, E02292, E02293, E01999, E02396, E02327, E02428, E01563, E02431, E01693, E01696, A43189, I66491, AR005163, I66492, I66493, AR005154, AR005157, AR005160, I66481, A43188, AR005153, E01024, A07699, A49695, A49696, AR050583, AR050584, E01148, A20700, I09267, I09270, E12527, E01503, I09268, I09269, AR005165, A08457, E12523, E02432, A49701, E01216, I77211, I09252, A95096, I09251, E08322, I70974, A32111, A08458, I66495, AR068550, A23373, AR068551, I13349, AR060673, AR060676, A10361, A95106, A95105, I66494, and A98420. |
| IHEKZ12 | 8712 | 878267 | 1 - 428 | 15 - 442 |

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| | | | E02096, A28163, E02100, A89634, I66490, E01997, A58998, E02291, E02292, E01999, E02396, E02327, E02428, E01563, E02431, E01693, E01696, A43189, I66491, AR005163, I66492, I66493, AR005154, AR005157, AR005160, I66481, A43188, AR005153, E01024, A07699, A49695, A49696, AR0051583, AR050584, E01148, A20700, I09267, I09270, E12527, E01503, I09268, I09269, AR005165, A08457, E12523, A21895, E02432, A49701, E01216, I77211, I09252, A95096, I09251, E08322, I70974, A32111, A08458, I66495, AR068550, A23373, AR068551, I13349, and AR060673. | |
| HHEK170 | 8713 | 955092 | 1 - 360 | 15 - 374 |
| HHEJR35 | 8714 | 878223 | 1 - 318 | 15 - 332 |
| HHEHK04 | 8715 | 925717 | 1 - 929 | 15 - 943 |
| HHEHG38 | 8716 | 943785 | 1 - 570 | 15 - 584 |
| HHEGC05 | 8717 | 930878 | 1 - 457 | 15 - 471 |
| HHEFN76 | 8718 | 767770 | 1 - 687 | 15 - 701 |
| HHEFM41 | 8719 | 711954 | 1 - 764 | 15 - 778 |
| HHEEY63 | 8720 | 744592 | 1 - 600 | 15 - 614 |
| HHEDDN70 | 8721 | 757106 | 1 - 376 | 15 - 390 |
| HHEDN51 | 8722 | 734118 | 1 - 380 | 15 - 394 |
| HHEDN49 | 8723 | 588136 | 1 - 384 | 15 - 398 |
| HHEDI54 | 8724 | 588129 | 1 - 551 | 15 - 565 |
| HHEDB30 | 8725 | 692086 | 1 - 550 | 15 - 564 |
| HHECT42 | 8726 | 588098 | 1 - 606 | 15 - 620 |
| HHECM62 | 8727 | 934414 | 1 - 534 | 15 - 548 |
| HHECA10 | 8728 | 973228 | 1 - 349 | 15 - 363 |

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| HHEBQ59 | 8730 | 739216 | 1 - 453 | 15 - 467 | Z82182, Z835987, and AL031674. |
| HHEBO04 | 8731 | 615127 | 1 - 452 | 15 - 466 | |
| HHEBM89 | 8732 | 786088 | 1 - 453 | 15 - 467 | AW365588, AW365645, AW178374, AW365586, AW178440, AW365663, AW375350, AW365798, AW351683, AW365799, AW365784, AW365743, AW365772, AW351664, AI809449, AI738507, AA972625, AI721277, AW178298, AW179229, AW365840, AW365686, AW365631, AI221680, AW375355, AI039710, AW365803, AW365680, AI559604, AA583144, AI200839, AI580997, AW179232, AW365593, AA306854, AW365585, AA280016, Z221375, AA280087, AW178307, AW365767, AW365850, AC005317, and AC005316. |
| HHEBM53 | 8733 | 728087 | 1 - 459 | 15 - 473 | AL037436, AL044199, AL037443, AL043677, AL043467, AL040576, AL038532, AL041635, AL043537, AL044074, AL045753, AL038838, AL041133, AL045920, AL041602, AL043492, AL044165, AL043775, AL038822, AL041752, AL040839, AL045857, AL046442, AL040745, AL045684, AL040617, AL040332, AL040255, AL040285, AL040342, AL040091, AL040128, AL040168, AL040253, AL044037, AL044186, AL040510, AL040625, AL045817, AL041142, AL041238, AL047183, AL040322, AL046330, AL041051, AL041292, AL040119, AL047036, AL047170, AL047057, AL047219, AL039915, AL040444, AL046327, AL041131, AL045725, AL049069, AL045990, AL041227, AL040458, AL040553, AL041159, AL044187, AL046150, AL043612, AL041168, AL041955, AL037435, AL040090, AL040263, AL037343, AL040294, AL041197, AL040329, AL039744, AL044274, AL040082, AL044272, AL040148, AL041730, AL041523, AL043627, AL041186, AL046392, AL043374, AL040052, AL043845, AL042135, AL044064, AL038983, AL039316, AL043923, AL043814, AL049018, AL040472, AL043848, AL040370, AL041459, AL043570, AL041577, AL044201, AL044258, AL046850, AL046147, AL040768, AL037727, AL039360, AL046994, AL042712, AL042096, AL040414, AL040571, AL040529, AL046097, AL046914, AL045671, AL042134, AL037335, AL046360, AL080031, AL040238, AL045994, AL039338, AL037323, AL037341, AL041346, AL079878, AL041140, AL041278, AL040155, AL039432, AL047131, AL037295, AL041096, AL041358, AL047012, AL040463, AL045989, AL044227, AL045784, AL040464, AL037279, AL041098, AL041163, AL041277, AL037371, AL043538, AL041324, AL043440, AL039087, AL040621, AL037259, AL043128, AL040075, AL036788, AL048647, AL037352, AL046099, AL041210, AL040149, AL041086, AL041296, AL044162, AL043496, AL041233, AL036230, AL079953, AL079852, AL040193, AL037361, AL036500, AL038761, AL049007, AL041246, AL042700, TR23957, T23888, AI525556, AI540967, AI525431, AI541365, AI043950, AI044015, AI044530, AI045340, AI541535, AI042245, AI541374, AI541514, AI541017, AI546891, AI039156, AI547039, Z30131, AL044530, AL036630, AL039504, AI546855, T23985, T24112, T02921, T24119, AI039156, AI547039, AL044530, AI044015, AI043444, AI546855, T23985, AW013814, AI039555, AI039509, AL039564, AL039538, AL038043, AL039108, AL039678, AI039566, AI039074, AL039521, AL039625, AL039648, AL039659, AL039629, AI045794, AI039476, AL043586, AL037726, AL038531, AL039109, AL040992, AL039924, AL039128, AL044407, AL044407, AL036973, AL042909, AL045341, AL045337, AL04412, AL037051, |

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| HHEBA86 | 8737 | 785413 | 1 - 529 | 15 - 543 | T51229, AI438982, AA045636, AI263382, and W44735. |
| EHEAL37 | 8738 | 491205 | 1 - 452 | 15 - 466 | AA846036, AA557945, AI061313, AA601336, AW157128, AI921744, AI038029, AW265468, AA618531, AA554289, AW239465, AA658443, AA828840, AI003068, AI251024, AL121039, AI702049, AA280886, AW021674, AI1318548, AI064968, AW162314, AI344906, AI753365, AW023390, AA101744, AA653139, AA644090, AW162332, AA157876, AW237905, AW021847, AI570067, AI1114755, AL135490, AA584489, AW148821, AA167656, AW410844, AA533660, AW439703, AW409626, AA828834, AA482682, AA507623, AI345256, AW131109, AI434103, AA631915, AW419389, AI027602, AI174703, AI520984, N99245, AA661583, AA761454, AI270280, AI815425, AA019793, AI254267, AW022796, AA601376, H47461, AW277240, AA847341, AI202777, AI361401, AA428991, AA496042, AI363336, AI149177, AI343808, AI744890, AI684999, AA205931, AI285651, AW029626, AA664963, AW162762, AI914748, AA847499, AA313025, AL135377, T15407, AI860423, AC006468, AC005755, AP000547, AF113694, AC006071, AL049694, AC004257, AC005585, AC006323, AC004997, Z82208, AF165926, AC004263, AF111168, AC007227, Z83844, AC016026, AC004685, AL020997, AC006088, AL031295, AC004000, AL049776, AL031662, AC000039, AC003037, AC005740, AP000692, AF107885, AL133163, AC005971, AC005822, AC007240, AC006449, AC004777, AC004812, AC008055, AL109952, AL034548, AL022165, AC004797, AC005529, AC005003, AL022323, AC005221, AC007934, AC005531, AC007066, AL035659, AC005694, AP000704, AC006581, AC005914, AC005071, AP000556, AC007536, AL133355, AC002310, AC003043, AC005632, AL121825, AC000353, AC003665, AC007508, AC016027, Z97056, AC004552, AC006512, AC005011, AC005288, AL031291, AF207550, AL021391, AL049856, Z98051, AC007845, AC007938, U91326, AC002464, AC002094, AC004801, Z75744, Z86090, AL022316, AL023553, AC006139, AC004972, AC005793, AL035072, AC004832, U91328, AC005826, AC004814, AC002039, AC006315, L78833, AL031427, AL109984, AL034417, AC004883, AC004913, Z97630, AL121652, Z82206, AC000026, AC002425, AC006379, AD000092, AC002316, AC006006, AL031680, AC004848, AC004099, AC005091, AL079340, AC005736, |

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| HHEAJ78 | 8739 | 773538 | 1 - 342 |
| | | | 15 - 356 |
| | | T50165, T50113, AF083037, AJ131693, AC004013, AJ101770, AB019691, AF091711, and AB018346. | |
| HHEAF06 | 8740 | 935355 | 1 - 873 |
| HHEAD08 | 8741 | 959305 | 1 - 913 |
| | | 15 - 927 | AA4225048, AA486071, AA225002, AA259264, and AA259263. |
| | | | AI653055, AW137083, AI206286, AI206167, AI825389, AI635444, AW080157, AI572778, AI689157, AA830536, AI872787, AI561356, T49776, AI273189, AI613028, AI621360, AI951062, AJ010953, I89947, and Z82022. |
| HHEAC20 | 8742 | 668948 | 1 - 445 |
| HHEAA02 | 8743 | 932265 | 1 - 618 |
| | | 15 - 632 | 15 - 459 |
| | | | AB0231164. |
| HHEAA02 | 8743 | 932265 | 1 - 618 |
| | | 15 - 632 | AB206987, AA174038, AW408551, T85017, AW407690, AW383801, AW372047, and D38553. |
| HFSBE12 | 8744 | 970629 | 1 - 306 |
| HFSBB12 | 8745 | 971571 | 1 - 411 |
| | | 15 - 425 | AB247356, and AA342973. |
| HFSBB06 | 8746 | 960835 | 1 - 312 |
| | | 15 - 326 | AA687273, AA342970, AA490838, and AA651799. |
| HFSAZ51 | 8747 | 725973 | 1 - 703 |
| | | 15 - 717 | W85737, AA203160, W86374, H73352, H73608, AA342722, and AF085998. |
| HFSAX30 | 8748 | 693419 | 1 - 370 |
| HFSAW27 | 8749 | 684668 | 1 - 359 |
| | | 15 - 373 | AA342872, and N50158. |
| HFSAU89 | 8750 | 785904 | 1 - 479 |
| | | 15 - 493 | AB048376, AA302964, N52560, AA630004, AA526343, AA721530, R86160, AA713765, AA431513, AA078184, AA714073, F05830, AA363003, AJ915081, AI884861, H99700, AI803741, F08866, AA741301, AW019964, F35684, AI520967, AI223968, AA663373, AA484892, AA079076, AI300818, AI310992, AA721523, AA678616, AA527954, AI859736, A1859906, AA078137, AI185394, R67701, AA579281, AA742949, N72607, AA664248, AA632556, AA657910, AA636102, AI276360, AA946848, AW084445, AI049701, AI678476, H84412, |

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| | <p>AA642809, AA223512, AA748102, AA729755, AI955249, AA766414, AI890324, AA244181, AA970967, AI002762, AI591134, N22153, AW079667, H79586, AA916430, W01323, AA640310, AA572982, R02063, AA937809, AA074143, AW073498, AI343669, AI309121, AI929410, AA595656, AI860535, AI753672, AI869786, AI802533, AI750950, R83068, AI459866, AI683019, AW068596, H67172, AA297195, R88817, AA810376, AA610233, AA523330, AA578231, AW392414, AW243945, D51809, AI077941, AA629731, AI927261, AA226770, R07452, AW341882, AA807579, AA353168, H86579, N63897, T55459, T87883, AA573000, AA481765, AA180775, AA757426, R08220, AA618180, H66755, H66832, AI279417, H86221, F31811, R88803, AA298365, AA527877, AA298394, AA744410, T57077, AA515254, AW237905, AA847427, AI678581, AA578973, AI434037, AA847508, AA593828, AA018923, AA371519, AA862029, AA012829, H43183, AA602935, AI564301, AA961554, AA741403, AA683069, R99076, AA713705, AA856866, AA5642, AA51572, AA605243, AA740571, AA074351, AI348467, AI973173, AA550959, R93642, AA745383, R64640, AI912401, AA653291, AA019003, AA551204, W35326, AA653783, AA745383, R64640, AI912401, AA653291, AA019003, AA551204, H66831, W35326, AA434346, H90845, AW151761, AF169957, AA568127, AI863287, N52293, AI797998, AA722505, AI871691, AI819262, N40092, AI471455, AI762302, AI583291, AI003137, AA077637, T87102, AA513884, AI687343, AA620510, AI525789, AA738283, F17537, AA747229, AI590404, U91318, AF064861, AC005081, AL132987, AC004796, AC003009, AC003663, AL096775, AP000193, AP000049, AL021155, AC005089, AP000311, L34635, U62292, AL096774, AL109827, AC005620, AC004491, AC004559, AC005971, AC005159, AC003678, AL034417, AC005015, Z99716, U73167, AL009183, U90094, AL109963, L47234, AC006597, U91320, AF045555, AC004815, U63721, AP000503, AC009363, AC007225, AC000379, AC016027, U78027, AC002064, Z98946, AC006130, AC005037, AC016830, AL034423, AL121754, AC007993, AP000030, AC006123, AC005940, AL049843, AC004998, AL035422, Z69707, AF134726, AL030997, AL022302, AC005722, AC02312, Z73361, Z83826, UT3330, AL049538, AF097485, AL034351, AB012723, AC008989, AL049576, AC004901, AC005663, AC008122, AC004891, AC003085, AL080250, AI035562, AC005664, AC004883, AL022718, AL049875, AC006547, AC007182, AC007308, AC004585, AC006116, AC002563, AP000117, AC004033, Z83819, AC005768, AC007875, AC004382, AP000210, AP000132, AC004785, AC005476, M84371, AC003690, AC007151, AC005225, AL035405, Z98304, AL132712, AL035400, AC005291, AC005280, AP000128, AP000206, AP000248, AC007279, Z83844, AC005920, AC004150, AP000300, AP000045, AP000113, AC006312, AL049793, AL049869, A1246003, AL020997, Z99758, I34294, AC009178, AC005827, U47924, U80017, AF124523, AC007690, AC006079, AC004953, AC005519, AC008249, AC012099, AC000159, AC003973, AL121658, AC005755, AL139054, AP000299, AP001068, AC004878, Z95331, AL049636, AC003667, AC007528, AC003982, AF196779, AL031577, AC006057, U92971, AF217403, AC005562, AP000245, AC007423, AL031407, L81909, U43589, AJ000219,</p> |
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| HFSAU84 | 8751 | 781861 | 1 - 462 | 15 - 476 AA002008, and AA342765. |
| HFSAT96 | 8752 | 504394 | 1 - 314 | 15 - 328 AA342649, AI417549, AI015042, AA937811, R10133, and AA809838. |
| HFSAT48 | 8753 | 720843 | 1 - 734 | 15 - 748 AW444617, AA127741, AI167643, AI766982, AA127805, AA026398, AA858903, AA026454, AI219704, AW150317, AA342691, and AB032980. |
| HFSAS86 | 8754 | 785851 | 1 - 371 | 15 - 385 AA232575, AI640189, AI654402, Z39790, AI569812, AI628986, T32417, R77502, and AA232707. |
| HFSAR68 | 8755 | 675246 | 1 - 496 | 15 - 510 AW242724, AL038812, AA847357, AA342457, and AA828137. |
| HFSAP25 | 8756 | 677463 | 1 - 471 | 15 - 485 T91860, AA342526, and AL050343. |
| HFSAK31 | 8757 | 504424 | 1 - 530 | 15 - 544 AA342210, and AA342211. |
| HFSAK14 | 8758 | 504431 | 1 - 338 | 15 - 352 AA342217, T89445, and Z82204. |
| HFSAI68 | 8759 | 753858 | 1 - 463 | 15 - 477 AA342239, AA453470, R88771, H67880, AA453977, and AC006017. |
| HFSAH34 | 8760 | 526472 | 1 - 683 | 15 - 697 H98141, AA932231, H13331, A342176, and AA774480. |
| HFSAG03 | 8761 | 960973 | 1 - 482 | 15 - 496 AI608909, AA652060, AA342084, AA297662, AC009247, AC007021, Z73359, AC006305, AC003101, AC005531, AL049776, AL050318, AC007151, AF001548, AC005919, AC003049, AI117355, AL096773, AL022316, AC007637, AL022318, AL022329, AL031602, AI023799, AC005670, AC002326, AC004531, AC000379, and AC005800. |
| HFSAF53 | 8762 | 728528 | 1 - 439 | 15 - 453 AA187595, AW269861, AI684495, AW269881, AW087253, AA342077, AI468367, and AA972820. |
| HEOQI52 | 8763 | 850966 | 1 - 399 | 15 - 413 AW088326, AI566702, T62825, AA483086, AA814532, and AA180167. |
| HEOPY91 | 8764 | 933173 | 1 - 536 | 15 - 550 AA283977. |
| HEOOA49 | 8765 | 942561 | 1 - 731 | 15 - 745 AW373840, R15032, and T97932. |
| HEONX61 | 8766 | 741864 | 1 - 324 | 15 - 338 T91881, AB011135, AC005670, and AC005829. |
| HEONO64 | 8767 | 746660 | 1 - 587 | 15 - 601 R98434, R98433, H59682, N54298, H59632, AW067991, and AB032993. |
| HEONO59 | 8768 | 741361 | 1 - 848 | 15 - 862 W37916, AW369323, AI138197, AA292636, AA789205, AA278688, AI077497, AI670821, AW117287, AA608906, AA382777, AA724269, AA278680, AA827227, AI160796, AA600253, |

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| | | | | AI990171, AA625768, W37874, AA421286, AA292637, AA844108, AA917528, AW316905, AA768446, and AF117210. |
| HEONN02 | 8769 | 840210 | 1 - 364 | 15 - 378 |
| HEONI19 | 8770 | 575884 | 1 - 476 | 15 - 490 |
| HEONL09 | 8771 | 961147 | 1 - 142 | 15 - 156 |

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AI802240, AW020710, AW150762, AW163554, AI043152, AI866770, AI277008, AI363957,
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| HEONL06 | 8772 | 935516 | 1 - 402 | 15 - 416 | AC006211. | |
| HEONK37 | 8773 | 707505 | 1 - 467 | 15 - 481 | H01559, and R27733. | |
| HEONK10 | 8774 | 964757 | 1 - 328 | 15 - 342 | AI159943, and AL109755. | |
| HEONJ18 | 8775 | 575888 | 1 - 325 | 15 - 339 | | |
| HEONI92 | 8776 | 792772 | 1 - 589 | 15 - 603 | T49908. | |
| HEOMX03 | 8777 | 922962 | 1 - 592 | 15 - 606 | AA812058, AA659324, AA582769, AA441788, AL041014, AA708352, AA572960, AL040800, AA810370, N32030, AA553439, AA649642, AI538540, AI445815, AI252506, AI139895, AW082744, F17700, AW265073, A1049831, AW028908, AA678436, AA904253, AI623899, AI270476, AI582890, AA601222, AI888405, AW272641, AA847741, AA810318, N64587, AW276984, AL119691, AA503600, AI623563, AA448838, AA448838, AI028540, AI090334, AA599063, | |

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|---------|------|--------|---------|---|--|--|
| | | | | AA655005, R92640, AA128592, AI754291, AI889923, AI870204, AA856969, AI357551, AI284640, AA553465, AI364809, AI291317, AI754955, AA338486, AA121777, AW273218, AW090144, AI301700, T08638, AA934680, AW192330, AW419081, AW238016, N25307, AI524540, AI299050, AA749235, AC006285, AC006312, AP000557, AC006480, AL031447, AC005488, AL121653, AC016025, AC005399, AC006057, AC005519, AC002059, AC004148, AC006449, AC005971, AC007216, AC005531, AL031662, AC004106, Z99128, AC008372, AC004227, AC005695, AF196969, AC007225, AL135744, AC004242, AC003029, AC002316, AC005015, AC005180, AF053356, U91321, AC002350, AD00092, Z97054, AL096701, AC005231, U95742, AP000553, AL079342, AC004841, Z99716, U91327, AC004983, AC004382, AC005632, U95090, AC005225, AC004796, AC011311, AL080243, AC004821, Z93017, AL021453, AC005089, AC004024, AL035659, AC007055, Z940444, AP000555, AP000356, AC005057, AC009516, Z99943, AL121603, AC003026, I44140, AC006001, AL031230, AC005372, AC004882, AL135879, AL121790, AF109907, AL022319, AP000193, AF001549, AL139054, AL031005, AL050308, AC005412, AC005209, AC007676, AL023879, AL031427, AL121655, Z95115, AC005899, Z49237, AC007308, AL031120, AC005182, AP001117, AL022336, AC004098, U95739, AL021391, AC006263, AB020863, AC004895, AC002996, AF107885, AC004686, AC004820, AF047825, AC006111, AF196970, AC005005, AP000688, AC005837, AL132712, AL109628, AL024498, AC007684, AL133246, AC005023, AC005274, AC007263, AC002404, AL022326, AC006211, AP000689, AC002477, AC004491, AC004678, Z97056, AC004253, AL031584, AF064861, AC005037, AC005288, AC003983, AC005102, AC005944, AC005785, AC004816, Y14768, AC004662, AP000967, AC012627, AC004234, AC004859, AF111168, AL109798, AC005379, AC005666, AC004099, AL031294, AC002301, AC002365, AF134726, AC006064, AL132777, AL022320, AC003043, AL049748, AP000558, AL031594, AC007731, AC006141, AL031846, AF002223, AC005796, AL050348, AC006026, AF111169, AC004799, AL033392, AF200465, AJ229042, AC005251, AL133163, AL121652, AC004996, AC004765, AC005200, AL022476, AL031432, AB003151, AC004815, AC004605, AC005736, AC007363, AL035530, AC004084, AL049779, AC004707, AC004212, AL022165, AP000346, D00591, AC003950, AC002128, AC002429, AC004858, AC002310, AP000505, Z84480, AL035683, Z99570, U63721, AC002039, AC005669, AC006132, AC005197, AL049869, AC006270, AC006071, Z98048, U62317, AC007543, Z98051, Z98036, U91326, AR036572, U91328, AF196779, AC004125, AL021978, AF037338, AC006241, AC005500, Z93241, AC005620, AC005696, AP000115, AC004263, AP000313, AL031985, AL023807, AC006121, AC006487, AL031276, AC004694, AC005081, AC002470, AP000692, AF217403, AL049871, AL022329, AC003104, AC005082, AC005529, AL133244, and AL031680. | | |
| HEOMX01 | 8778 | 913683 | 1 - 545 | 15 - 559 | | |
| HEOMV61 | 8779 | 506231 | 1 - 513 | 15 - 527 | | |

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|---------|------|--------|---|----------|
| | | | AA862227, AW238542, AI343143, AA828696, AA587995, AW439480, D29019, AJ925579, AI732690, AI929746, AI590442, AI133861, AI251576, AI929738, AA342945, AA579366, AI872503, AI307201, AW021886, AI278972, AW238583, AI366555, AI446821, AI734070, AI821467, H58672, AC008372, AC006064, AC002115, AL021937, AC004000, AC005153, AI132987, AL117258, AP000359, AF064861, AC009248, AL049829, AL031280, U91326, AC004678, AC005280, Z82194, AL035587, AC004699, AC004821, AP000512, AL008582, AC005726, AF109907, AL035249, AL049759, AP000555, AC007371, AC004765, AC008115, AC007182, AC008134, AL022326, AC005764, AL023553, L78810, AJ239318, AC005620, AL132777, L44140, AC006480, AC004638, AL031650, AL035410, AF196971, AL022476, AL031257, AC005803, AL033525, AC005695, AC007536, AC008984, UT3634, AC004777, AL109628, AC005358, AL035450, AL020993, AC002544, AC003112, AC006312, AF165926, AC002073, U62293, AL031577, AC002558, AC003101, Z85986, AC005291, AL023574, AP000248, AC002565, AP000355, AC005531, Z83822, U95742, AL031728, AC004983, AC007312, AC007308, AC006285, AC006530, AC006077, AJ239322, AF001549, AC004859, AC004984, AE195658, AC005041, Z84572, AC005288, AC004835, AC004694, Z83844, AL022722, AC005562, AC006270, AC004148, AC004125, AC005197, AC006965, AL109627, AL035072, AE000658, AF001552, AC005353, AC005667, AP000466, U85195, AC002119, AC004810, AC007036, U95740, AL050318, AL096701, AC007560, AL096678, AC007738, AC005740, AL096791, AC005048, AL009031, AC009247, AL034549, AF117829, AC012384, AC007285, AC002375, AC005088, AC005589, AC007227, AC005725, AP000495, AC005911, AC004024, AC004751, AC006539, AC004878, AL031255, AC003108, AC004841, AC005182, AC008154, AC002563, AL031985, AL035681, AL022324, AB023049, AL049830, AL049776, AC004819, AL022313, AB016897, AC005599, Z98044, AC004887, AP000494, AC005536, AJ003147, AC005074, AL022320, AC005057, AP001040, AC004887, AP000494, AC005536, AJ003147, AC003119, AP000038, AP000106, AC007216, AC005004, AL133163, AC002331, AF053356, AL121923, AP000018, AC004477, AF038458, AL133245, AC006449, Z68756, X55448, AC007541, AL022160, Z83840, AC005529, AL121825, AL022318, AC005225, AL117337, AC004797, AF205588, Z97053, D87675, AL022721, AC005480, AC005944, AF196969, AB020863, AC002300, AP000557, AP000514, AC005332, AC004056, AL080243, AC003013, AL023879, AL049780, AL049757, AC004106, AC005971, AP000476, AF003626, AL050312, AP000556, AC005100, Z83838, AP000210, AP000132, AC005206, AC005940, AL049635, AC004687, AC005670, AC007324, AC005324, AC005696, AL132712, AF067844, AC005082, AC004895, AD000092, Z95331, AL021453, AC003086, AL021368, AL031281, AL049872, AJ229041, AL031670, AC007879, and Z82185. | |
| HEOMQ68 | 8780 | 753075 | 1 - 270 | 15 - 284 |
| HEOMQ04 | 8781 | 931032 | 1 - 848 | 15 - 862 |

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|----------|------|--------|---------|---|
| | | | | W31286, AA045823, AA780299, AA449362, AW237037, AW008432, AA449623, AA886147, AI924764, N66129, NT7569, AA737269, AI796181, AA328292, AA523165, AI934498, AA083786, AI291525, AI475558, AA384850, AA919079, AI928049, AA532529, AI933049, AW021922, AA548761, AW383474, AW383521, AI536641, AI568378, AI280669, A815855, H43514, AI694909, AA669083, AI912666, AI864383, and I76237. |
| HEOML91 | 8782 | 667931 | 1 - 300 | 15 - 314 |
| HEOML76 | 8783 | 575927 | 1 - 211 | 15 - 225 |
| HEOMMH63 | 8784 | 745146 | 1 - 416 | 15 - 430 |
| HEICC56 | 8785 | 733383 | 1 - 154 | 15 - 168 |
| HEIBBB84 | 8786 | 781994 | 1 - 394 | 15 - 408 |
| HEIBBB31 | 8787 | 697987 | 1 - 337 | 15 - 351 |
| HEIBA15 | 8788 | 888667 | 1 - 414 | 15 - 428 |
| HEIAIX24 | 8789 | 677177 | 1 - 358 | 15 - 372 |
| | | | | AA365988, AW406755, AA587256, F29989, AI35829, AW193265, AI613280, F36273, AA482711, AW029038, AI284640, AW276827, AI350211, T58118, AI570261, AI431303, AI345654, AI281881, AW303196, AW274349, AI434695, AW438643, AW301350, AI334443, AI619997, AI270117, AA826303, AA649642, AI963720, AI918421, AI610159, AW265385, AW088202, AI299050, AI904894, AI254615, AA491762, AW327868, AI358571, AI503015, AA682912, AA653618, AA469451, AI039790, AA843450, AI564185, AI573020, AI358501, AA613227, AA559290, AI567076, AA610491, AI305766, AW270270, AI038785, AA525190, AA587604, AW103758, AA507547, AW276435, AA720702, AI249997, AI047427, AA586458, AI368745, AI801600, AI919265, AA503154, AA581903, AI044940, AI801482, H84783, AA259245, AI307608, AA503258, AW021583, AI732120, AI792518, AW080134, AI457397, AI434706, AI583612, AA810318, AW021207, AA846935, AW406447, AA657918, AW008952, AW071196, AI251436, AI053790, AI267818, T53607, AI80923, AW439558, AA483771, AW088846, AI049722, AW166815, T15977, AI929531, AA148489, AW419262, AA630925, AA837084, AA623002, AI567674, AI281903, N94233, AW304584, AI471481, AI355206, AI754658, AA491284, AI792505, AI688846, AW193432, AI339850, AI251002, AI037683, AI866856, AW238278, AA713815, AI138455, AI133636, AW162049, AW339687, AA515051, AI962050, AI937850, AA847499, AW023389, AL119691, H71429, AA062722, AI754253, AI083946, AW083402, AI886629, AA513141, AW062724, AI133164, AI446464, AI061334, AI635272, AA525824, AA482681, AA631507, AI358343, F28204, AA652057, AA488746, AI499503, AW440836, AI653886, AI048925, AA229785, AA501872, AA350859, AI368256, T29180, AA501614, AA348929, AA502963, AA503473, AI334435, AI250552, AA664407, AI654247, AW304805, AA669251, AI312309, AW020992, AA834667, AA113186, AW167799, AA099892, AW020141, AI251034, AI254770, AI589230, AA659083, AI192631, AW261871, |

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|---------|------|--------|---------|----------|---|
| HEIA186 | 8794 | 785680 | 1 - 200 | 15 - 214 | T52922, T52923, and AC005368. |
| HEIAD76 | 8795 | 574163 | 1 - 267 | 15 - 281 | AI355103, F23338, AA503307, AA503142, AI246996, F34506, AA484892, AA507814, AI791659, AA523695, AA365586, AA720582, AI031759, AA587316, AA745524, AI590442, AA714011, AI053673, AA744001, AW304592, AA504951, AA7779783, F09355, AI251429, AI580707, AI181362, F17700, AA311357, AA810158, U73647, AC007227, AF196969, AP000501, AC002347, AL031905, AP000300, AP000045, AP000113, AC005632, AC006050, AC007016, AC007536, AC005829, Z95152, AL049548, AC004815, Z69837, AC006965, AL121595, AP000248, AC001228, AL050307, AL049569, AC005914, AC002551, AL133163, AP000555, AC006088, AC004985, AC005516, AL008718, AL109984, AC007435, AC005701, AC002369, AC006505, AC006312, AL025575, AC005375, AP000260, AC006011, AL020993, AL022316, AC005104, AC006077, AF111168, AP000099, AP000116, AC002126, AC008928, AF002223, AP000036, Z99496, AC002316, AC005520, AL021154, AC006241, Z93024, AL049760, AC008115, AC007899, AL031597, AC006455, AP000500, Z84466, AC002425, AP000141, AC005102, AL022326, Z97056, AF207550, AC005587, AC005015, AC007055, AP000088, AC002364, AB023049, AF049895, AC006511, AC006344, Z95114, AL121923, AC005180, Z84480, AL034417, AC004129, D87675, AL022721, AC005089, AC004752, AC004893, Z98200, AC002554, AC005531, AC0055231, AL031295, AL117258, AC004674, Z83826, U29953, AC005616, AC016026, AC005344, AC009336, AC004933, AC007292, AC003003, Z95113, Z81364, AC004522, AC005332, Z93017, AC003042, AL049643, Z84469, AC006121, AL133246, AL035588, AC006930, AC004526, AC006409, AL022165, AC004851, AC004876, AC005837, AL034371, AC004811, Z97630, AC007993, and AC004844. |
| HEIAC62 | 8796 | 745672 | 1 - 245 | 15 - 259 | AP000011, and AP000153. |
| HDTMJ27 | 8797 | 851806 | 1 - 498 | 15 - 512 | AA434364, AA631736, AI051874, AA460723, AA502498, AA471086, AI025722, AL132985, AC004447, AC005261, AL031432, AC004560, AL079305, Z83838, AC004030, AC005776, AC005387, Z70050, Z73986, AC007240, AC011604, AL031782, AC004821, AC006222, and AP000164. |
| HDTLI05 | 8798 | 928253 | 1 - 488 | 15 - 502 | AA769122, AL044520, AL042431, AA648784, AI208877, AI024841, AA804545, AW340113, H82877, R64372, R64371, and AL137391. |
| HDTLE28 | 8799 | 851830 | 1 - 454 | 15 - 468 | AA916035, AI246061, AI054090, AI249853, AI284543, AI254770, AI251944, AI251034, AI251203, AI251284, AI250552, NT4027, N71579, T60940, AA687542, AI251241, AI223626, W63553, AW303098, AA434346, AA636102, AA827383, N22153, AW073498, AI929410, AI753672, AI750950, AW167909, AW407585, AW019964, AW410286, AI018726, AI860535, AA365893, AL039309, AA468289, AI732682, AI720943, AA653823, T08386, AA133472, AA714073, AI927261, H86579, AA448050, AW089950, AA211734, H43183, AA655304, AI354369, AA018923, AA012829, AL039930, AA559166, AI902426, AA741301, AA094597, AI570805, H63220, AA169234, AI755057, R68503, R99581, AL138065, AW082076, AA527109, T74259, AI174703, AW057873, AA657910, AA179981, AA837796, AI537020, AA084950, |

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| | R48980, AA564753, AA411590, AA688266, AA256107, AA599749, AA856866, AA743968, AA837739, AA513884, AA610374, AI133580, AA386055, AA527954, AA429481, AA214457, AA605020, T03928, AI355559, AW238495, AL037006, AW274525, AA748102, AA593036, AI298079, AA515351, AA704037, AI087843, AA424249, AI348467, AA736713, W60035, AA135988, C14599, AI908424, AI871691, AI284105, H30595, AI471455, AW392887, T06518, AI671077, C14576, T03401, AI037777, AA502230, AW082742, AI989742, AI687343, AI459866, AA744095, AI124779, C14880, AA678950, AI761566, AA282231, AI799421, AI434365, H24957, H45806, AI201668, AA501371, AW407632, AI383965, AA321523, AA227858, AI399872, AW151761, AA077796, AA572743, AL031685, AL096712, AP000501, AC002350, AC005952, AC004383, AC020663, AC008685, AL031728, AL021808, AC005920, AC004922, AC002565, AC005815, L44140, AC005926, AB020874, AC005004, Z95115, AC004849, AC006116, AL031659, Z83851, AF064859, AC004000, L78810, AC005088, AC005971, AC002477, AC005666, AC007308, AC002470, AL031255, AC004874, AC004913, AF196969, AL031132, AL035659, AC010197, AC002070, AC005821, AC005015, AF165142, AC006021, AC004132, AC007685, M15366, AC005328, AF196970, AL049694, AL035086, AC006057, US8047, AC003689, AL035249, AC007533, AC006263, AF181896, U72788, AF030453, AC003029, AC007051, AC005181, AC007225, AP000503, AP000667, AL034427, AC005903, U95741, AL008582, AC002483, AL031666, AL008730, AC004941, AC005375, AL035070, U95743, AL139054, AC004682, AC004051, AL031602, AL022320, AL021879, AP000065, AL021393, AC008044, AF165926, Z97054, Z94277, AB014460, AC003030, AC005600, AP000201, AC004934, AP000097, AC004056, U91323, AC004801, AC005386, AL109628, AC007100, AC006070, AF116548, AF029062, AB000876, AC004181, AC004560, M89651, AC005210, AP000230, AP000506, AP000144, AC002394, Z85987, AL035587, AC003007, AL109967, AL132712, AC004999, AL031670, AC006001, AL021578, AB000882, AC002543, AC005184, AL049712, AC005531, AC006083, Z98884, AC005225, AL022721, Z98949, AC004963, AC00491, AL080243, AC006538, AC003685, AL022476, U85195, AF111168, AE000658, AF015262, AJ229043, AP000362, Z98751, AB016625, AC004628, AC008975, AL031575, AL008725, AL023575, AL031230, Z97989, AC005585, AC004832, AC005224, AC007736, AC007066, AC004125, Y10196, AF023674, X54486, AL049849, AL031447, AC005630, AC012085, AP000240, AL133445, AL133275, M33132, AP000319, AP001064, AC000075, AC003072, AC000084, AD000091, AC002491, AC006277, AC006942, AB015355, AC005778, AC005619, AL121923, AC004656, AP000228, AC003678, Y07848, AC005067, Z73358, AC004975, AL031594, AP000167, AP000052, AP00120, AC002375, AC005663, AF155238, AD000092, AL008583, AP001065, AC004815, AL031657, AC002491, AC006277, AC006942, AB015355, AC005778, AC004876, AC007114, AC005664, AC004477, AL022398, Z97205, AC007388, AC002059, AF196779, AC005722, AF002223, Z99943, AL136295, AC005209, AC005387, AC004685, AC006543, Z98044, AC005670, AF027390, AF217403, X77825, AL049713, AF134726, |
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| | | | | AB029343, AC003036, AL031718, U29895, AB023059, AC004195, AC005546, AC005391, AC004834, AP000509, Z99570, and AL009181. |
| HDTLB90 | 8800 | 969209 | 1 - 721 | 15 - 735 |
| | | | | AI341704, AI142398, AA813273, AA743887, AI936676, AI075351, AA910854, AI022782, AI147388, AA707809, AI191594, AW149648, AI359585, AA310281, AI189686, N66573, H08536, AI262892, N95604, AA741331, AI248487, AA868324, W02990, N22795, AA262629, AA609701, AI093401, AA659738, H87698, AI027373, AI027121, AA978057, AA983525, N48015, AI720012, AA447262, AI356159, R59460, AI678874, AI952101, T34018, AI142529, AI690064, AA441994, AA992142, N35367, AI187027, AI421750, AA768375, AI079205, AA447137, AI569001, AI860552, AI826993, AI306687, AW080519, AI381210, AI582792, AI040724, AA243615, AI004382, AA586674, AI336096, AI241252, AI591409, AI499068, AW026852, H08537, AW008824, AI123841, AA627439, N72902, AI369126, AI611839, W73025, AI336409, AA441993, AA837530, AA8065979, AI886595, AA301661, R59400, T35913, N98833, T25882, W25044, T31881, T81454, H87190, R27910, AI560041, AI560047, T25881, AA723754, AA436622, R27815, AA748322, T81453, AA680083, AI348535, AA861174, AA687982, AA336442, H86836, AF161514, and Z57379. |
| HDTKX61 | 8801 | 806340 | 1 - 657 | 15 - 671 |
| | | | | AI040934, AI354583, AI811104, AA102590, AI955210, AW005356, AI923908, W72822, AI869691, AA776240, AI097401, AI241672, AA610244, AA136144, AA432194, AW029577, N57854, AW026450, AI913174, AI439590, AA676743, AW173719, AI912350, AI126189, AI246619, W15338, AI573143, N62095, AA632265, AW262961, AW338014, AA599002, AW080405, AW342043, AW170642, AA977345, N57753, AA809373, H24394, AA046519, AA648676, AA159091, AI032839, AA136030, AA583776, H28894, AA848077, F33112, AA910294, AW016492, AA678502, AI916065, N88118, AA350391, R44633, AA082176, H03994, W72821, AW166715, AW149167, H45880, N78326, AA046611, R44522, AI245126, R16997, H03195, AW021036, AA355730, AA598543, AI873982, AI203820, AI559841, H27347, AI590119, AA724015, AI243914, N76000, AW271164, AA482202, AA344508, H28893, H62505, AI117455, and AC004466. |
| HDTJP10 | 8802 | 963456 | 1 - 606 | 15 - 620 |
| | | | | AI355562, N27028, AA501942, AA365628, W32376, AA365629, AI733856, AW069227, AA847499, AI634187, AW328331, AW023111, AW327624, AA410788, AI791185, AI457313, AA526683, AI284640, AI859438, AI821076, AI056177, AW069769, AA904275, AW341903, AA630854, AI287766, AI491765, AA502991, AA584489, AI254770, AL046409, AA581903, AI079734, AI755214, AI754567, AA228778, AI14557, AA535216, AA515351, AI284543, AI431303, AI754105, AI282479, AW407578, AA809546, AI251034, AI223626, AI250552, AW085751, AI251284, AW271904, AI963720, AI135377, AA669155, AI923050, AA833875, AA833896, AI186438, AI912401, AI047349, AW193265, AW026305, AI133552, AI457397, AW303098, AI305766, AI251203, AI421950, AI419337, AI114733, AW265688, AW023672, AI249853, AW303196, T74524, AI310670, AI199816, AA513851, AW419262, AI049676, AI278440, AI277373, AI284126, AI133164, AW029515, AI587349, AI473995, AW274349, |

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| AW275432, AW301350, AA916430, AI349130, AW021583, AI332615, AA640685, AA613627, AI049630, AA129746, AI679002, F36273, AI267269, AI361090, AW328000, AW157005, AA469451, AI270117, AA491814, AI017251, AW169038, AW073470, AA832016, AW328446, AW167230, T05834, AA584484, AW088846, AI380617, AA610433, AI267356, AI267450, AI669421, AI446623, AW084445, AI065038, AI560085, AI345681, AI345675, AW277253, AP000555, AC005216, AC006509, AC004455, AC007488, AC004963, AP000114, AP000046, AL008583, AF196972, AC003101, AL022323, AC002470, Z93848, AC005527, AL049760, AC006236, U63721, AC004000, D84394, AL049776, AI049643, AC004253, AF111167, AI033527, AC007786, AC005015, AC007216, AL133163, AP000302, AC005261, L78810, AC004109, AC004921, AC003662, AC005409, AC005006, AC002991, AC005529, AC004027, AC002456, AC004386, AL139054, U62292, AC004975, AC005088, AC007151, AF196779, AC006946, AP000563, AC006088, AC005606, AC005971, AF165926, AC007277, AC002316, AP000211, AP000133, AL132777, AL035423, AL020997, AL022163, UT8027, U91323, Z822206, AC000353, AB001523, AC004797, AL031683, AC005697, AC005972, AC006080, AC006333, D87675, AC004526, AP000103, AC005907, AL023284, AL035422, AC007546, AI096702, AC010205, AC005005, AC007227, AC005736, AC006511, AC007066, AC005089, AC002314, AF108083, AD000090, AL031589, AC004953, AC007406, AC007664, AC007308, AB026899, AC007934, AC005363, AC002492, AC005184, AL035420, AC005486, AF196969, AF001549, AC002301, AJ003147, Z98752, AC005619, AC005921, AC006157, AC002480, AC005399, AC006014, AC003663, AC007919, AL109952, Z93023, AC007537, AC005484, AC007878, AC003014, AC006238, Y10196, AC005274, AL035695, AP000553, AL133448, AC005288, AC007172, AC000397, AC006312, Z84466, AC005207, AC000025, AC003109, AC005482, AL109829, AC005844, AL078615, AC004033, AC002288, AC006285, AC004032, AC020663, AL035086, AL133245, AL109623, U95742, AC005591, AL049631, AC005225, AC004895, AC004841, AF111168, AC005300, AB023049, AL031432, AC006211, Z85987, AL133396, AC007011, AF207550, AD001527, AC006449, AC005368, AC006050, AL034417, AF114156, AL049856, AC002045, AC003036, AC004534, AC008064, AC005578, AF031076, U80459, AL034549, AC008056, AC005618, AP000031, AC004967, AC005940, AP000500, Z98050, AC004821, AC004890, AL050307, AC005082, AC004234, AF053356, U52112, AC005666, AI049839, AC005763, AC006556, AC007242, AC003963, AC016025, AC005338, AL024498, Z85986, AC007911, AC005331, Z83840, AC008273, AL023575, AC005701, AL110502, U47924, AC005220, AC007637, AC005183, AC007225, AP000557, AC004596, Z69917, AC005488, AC007193, AL096791, AC005669, AC005581, AC005755, AL020993, AC002059, AC004099, Z82254, AI035684, AC007731, AC005520, AC004835, AC005500, Z82243, AC002117, AC004602, Z83826, AC004815, AL035079, AL034548, AC005095, AL035413, AC006026, AC006023, AC009946, AC005083, AC006102, AL031650, AC006071, AL031721, and AC005094. |
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| HDTFJF29 | 8803 | 887186 | 1 - 676 | 15 - 690 | AI250783, AW391672, AI240525, AW390571, AW391632, AW392670, U46347, AL119324, AL119457, AL043003, AL119484, AL119399, AL119439, AW384394, AW363220, AL119319, AL119443, U46351, U46350, AL119391, Z99396, AL119363, AW372827, AL119497, AL042544, AL119355, U46349, AL119322, U46341, AL119444, AL119483, AL119418, AL119396, AL134530, AL134519, AL134528, AL119341, AL134531, AL037205, AL119401, AL134132, AL134527, AL043147, U46346, AL119335, AL134533, AL119464, AL042542, AL119496, AL134538, U46345, AL042614, AL043019, AL042989, AL042450, AL042984, AL042965, AL042975, AL043029, AL142134, AL042551, AB026436, AR060234, AR066494, AR054110, A81671, and AR069079. |
| HDTIF05 | 8804 | 931977 | 1 - 589 | 15 - 603 | AA425488, AA496895, AA300351, H55595, AP000556, and AP000557. |
| HDTI074 | 8805 | 933606 | 1 - 520 | 15 - 534 | AW293197, AW293194, R09230, AA550736, and AA210814. |
| HDTI016 | 8806 | 934151 | 1 - 708 | 15 - 722 | W26496, N57723, N52977, AA004838, H56093, N32636, H54711, R97812, AA422017, AI434982, R34827, A1365246, AW149465, N53236, R97527, W04839, W27301, W17360, AI952152, AW197683, AW300911, R93262, AI627239, AW368243, AW118723, R81605, AW301730, AA347582, N42589, AA521269, AA279227, N35846, NS5666, AA279276, AW207386, AA744257, AI791321, AI791441, AA401856, W73744, AA912709, W32639, AI457999, AA035799, W73796, AW149460, AI952156, AA825542, AW043735, AA279170, AA843886, AI004999, AI204320, H43539, AI928422, AI453601, AA628709, AI887910, AA814386, AI138354, AF072880, AF112205, AL110243, AF106683, AF069313, AL110269, AF033186, AF106684, and AF147442. |
| HDTIG62 | 8807 | 851951 | 1 - 500 | 15 - 514 | AA700898, AA768022, AA813637, AA737687, AA767493, AI590110, and AC004585. |
| HDTIA48 | 8808 | 851944 | 1 - 760 | 15 - 774 | AI686160, AA758552, AI051885, AL039783, and AA890108. |
| HDTHU79 | 8809 | 774217 | 1 - 570 | 15 - 584 | AA284279, AI027731, AI200797, W47103, W47227, AI693941, AW298283, AI222304, AA815341, AI216510, AA813403, and AF086197. |
| HDTHS05 | 8810 | 926048 | 1 - 887 | 15 - 901 | AA253336, AA252921, AA253337, W22197, H27708, R53233, M85815, AA428556, AI745023, AW367630, AA922917, AW363034, AA705731, H66556, AI952500, AA676981, AA640067, T31521, R02288, HT0507, AA011599, AW089024, AW368517, R59789, AA298276, AA878199, H91633, R06356, N99822, and AB018271. |
| HDTHP45 | 8811 | 841796 | 1 - 436 | 15 - 450 | AC007458. |
| HDTHI02 | 8812 | 918728 | 1 - 468 | 15 - 482 | AA441986, AA441987, AI051488, AL119444, AL119363, and AL134538. |
| HDTHG69 | 8813 | 754464 | 1 - 347 | 15 - 361 | R05736, and AC001226. |
| HDTHE32 | 8814 | 851964 | 1 - 686 | 15 - 700 | AW295293, AA005236, AW293791, AA564263, AA005235, and AI024494. |
| HDTHA77 | 8815 | 771334 | 1 - 594 | 15 - 608 | RS4682, T83899, AA028933, T86103, AI700021, and T83729. |
| HDTG762 | 8816 | 742828 | 1 - 479 | 15 - 493 | RI0737, RI0755, and AW206939. |
| HD TGQ31 | 8817 | 697539 | 1 - 368 | 15 - 382 | W57998, AA082443, AI979163, N50386, AA730309, AA282104, AL046056, and AF191338. |
| HD TGH10 | 8818 | 963966 | 1 - 399 | 15 - 413 | AA968621, and AA911679. |

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| HDTGC27 | 8819 | 682687 | 1 - 417 | 15 - 431 | T84741. |
| HDTFX46 | 8820 | 915075 | 1 - 489 | 15 - 503 | T91421, AI244540, W95696, AA513866, and Z69706. |
| HDTFT42 | 8821 | 713399 | 1 - 552 | 15 - 566 | AA251180, and AA284335. |
| HDTRF93 | 8822 | 792077 | 1 - 654 | 15 - 668 | R56502. |
| HDTFN38 | 8823 | 706752 | 1 - 592 | 15 - 606 | N67992, AA018753, AA216176, and AC007283. |
| HDTFI27 | 8824 | 682705 | 1 - 635 | 15 - 649 | AI424830, AI457466, AI670852, AW188237, AW339932, AI373737, AW299809, AW299801, T65024, AI215514, AW268571, AI275416, AI806477, AI420494, AI431933, AI697604, AW194622, and H18633. |
| HDTFG15 | 8825 | 913812 | 1 - 518 | 15 - 532 | AI948523, AI870933, AI056919, AI951357, AI669067, AI421240, AI829531, AW026102, N95469, AA761710, AI422906, AI985084, R39935, AI500548, T58434, AI971673, AI620958, AI368450, AA825904, AI950288, T58466, T16707, AA903364, AI648626, AA262655, D25575, C21036, and AA255726. |
| HDTET62 | 8826 | 587822 | 1 - 753 | 15 - 767 | AA058837, H85875, AA866204, D62678, and AW023681. |
| HDTEJ57 | 8827 | 872215 | 1 - 462 | 15 - 476 | HI14223, and R90827. |
| HDTDS89 | 8828 | 799881 | 1 - 258 | 15 - 272 | AL121748. |
| HD TDS44 | 8829 | 799863 | 1 - 430 | 15 - 444 | |
| HDTDP20 | 8830 | 883680 | 1 - 412 | 15 - 426 | T11249, AF207598, AF157833, AF205065, and T11264. |
| HDTDP02 | 8831 | 919572 | 1 - 436 | 15 - 450 | NA46884, AI741360, AA677764, R10708, AI751761, AA694111, AI333381, AW305001, AI538973, N71175, AA779766, AI589032, AI086570, AI761580, AI885734, AW131854, AI028092, AW054930, AA843208, AI188410, AI457118, AW338608, AA574231, AA224194, AI221082, AI149382, AA918408, AW166459, AI332782, AI183618, H46974, AI359210, AI969702, AF151872, and AI110239. |
| HDTDL15 | 8832 | 851999 | 1 - 405 | 15 - 419 | AW119198, AW268984, AW291411, AI699375, AI538081, AI880221, AI989588, AA936261, AA744022, AA744306, AA744319, and AA744343. |
| HDTDJ44 | 8833 | 587742 | 1 - 521 | 15 - 535 | AI003653, H92228, AI370273, AA708248, AA018367, AA069415, H85653, H86634, and AA017687. |
| HDTDG89 | 8834 | 799870 | 1 - 403 | 15 - 417 | |
| HDTDD88 | 8835 | 615173 | 1 - 426 | 15 - 440 | AA496215, AA196044, U53093, AA055124, AA055135, and AW387762. |
| HDTDD72 | 8836 | 587710 | 1 - 520 | 15 - 534 | AI459473, AI065079, AI207423, AI064695, AI133218, AI133420, AI133314, AI061660, AI064797, AI888487, AI037870, AI037849, AI048429, AI884494, AI833147, AI717995, AI709394, AI832355, AI924211, AI720552, AI653760, AW007608, AI064831, C18852, AI669077, AI174665, AA468404, AI750150, AA533828, AI133004, AA659265, AA594949, AI037048, AA630170, AI912529, AI434498, AI459425, AA575977, AW275829, AA886596, AI215649, AW270021, AI124928, AA578589, AA548849, AI832732, AA098789, AI628930, AW004905, AI720986, AA630251, AI683207, AW149630, AA886490, AA595864, AI028073, AI880409, AW188463, AA075342, AI635477, AW168232, AI720912, AI133259, AA226261, |

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| | | AI766356, AA493969, AI557254, AW166013, AA650306, AA481885, AA224000, AA643797, AA522984, AA630934, AA635953, AA640561, AA081407, AA487595, AI523371, AA928597, AA641058, AA196188, AI174946, AI720139, AA223926, AI207597, AI917042, AA485715, AA715869, AI114770, AI581199, AI282481, AA434248, AA88285, AI457496, AA661972, AA610388, AA655025, AA654984, AI566184, AA565126, AA579042, AA468098, AI619745, AI281861, AI880360, AA846579, AI566210, AW148749, AI673024, AA490180, AW439689, AI459556, AW151854, AW105642, AA656898, AA640469, AI114764, AW276852, AA653781, AA487063, AA494046, AI440020, AI719804, AA557411, AA525479, AI133099, AA554077, AA151927, AI749073, AA180944, AA564042, AI719813, AW264074, AA831811, AW170761, AA689249, AA658941, AA578602, AI749006, AI819696, AI557330, AA458961, AI525681, AA664578, AA708303, AI708946, AA541550, AA569249, CI7580, AA069723, AI832960, AA715954, AI832523, AA621867, AI459634, AA152380, AA978232, AW165955, AA429018, AA487982, AA171686, AA469406, AA640693, AI133698, AA483365, AI453511, AA987421, AI630887, AI289950, AA654821, AA932808, AI907036, AA523493, AA092811, AA782565, AI110646, AA127653, AA524676, AA594572, AA707831, AA987694, AI224374, AA642859, AA665359, AI749484, AA886120, AA226553, AI749741, AA654759, AI2208359, AA130968, AI830077, AI110645, AA216405, AI879900, AI798362, AA467980, AI748977, AA503933, Z98453, C18031, A1863894, AW270540, AW129234, AI207835, AI560053, AA192171, AA635254, AW005658, AA702315, AA635387, AA180752, AI636965, C17988, AI871732, AA552550, AA825856, AL036180, AI002449, AW073816, AA630259, AI832769, AI557197, AI281571, AA075402, AI832630, AI833305, AA229013, AA433875, AA149604, AA468444, AA659277, AI582341, AI720332, AA652848, AA661464, AA523743, AA148381, AA635244, AI833268, AI833301, AA209412, AW005955, AA715602, AA654048, AA216162, AA129443, AI253348, X62996, X93334, D38112, V00662, J01415, AF134583, X93335, D38116, D38113, Y17171, Y18001, S55589, Y17179, and AF004340. | |
| HDTDD70 | 8837 | 757088 | 1 - 453 |
| HDTDD70 | 8838 | 754739 | 1 - 458 |
| HDTDD70 | 8838 | 754739 | 15 - 472 |
| HDTDD70 | 8839 | 668754 | 1 - 415 |
| HDTDC74 | 8840 | 799868 | 1 - 501 |
| HDTDC64 | 8841 | 799871 | 1 - 424 |
| HDTDC64 | 8841 | 799871 | 15 - 438 |
| HDTDC64 | 8842 | 706741 | 1 - 613 |
| HDTDC38 | 8842 | 706741 | 15 - 627 |
| HDTDC38 | 8843 | 692063 | 1 - 276 |
| HDTDC38 | 8843 | 692063 | 15 - 290 |
| HDTDC30 | | | |

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|---------|------|--------|----------|---|--|--|
| | | | | AA502568, F37052, AA507991, AW189401, AW192518, AA524846, AA744549, AA744068, AA548382, AA491424, AA056461, AA658179, AA652771, AA532512, AA372106, AA402269, AI357815, AI917891, R62497, H56521, AI494481, AI039451, AA354695, AL138252, AA402638, AA340911, AW072587, AI184354, AA128509, AA092704, HO4195, AA362372, AL040324, AL118573, AI348611, H03398, AL045954, H03415, H87153, AA594061, AI085270, AA601460, AA088697, AA228381, AI760835, AA677939, Z94801, AL050332, AC006978, AC007349, AC004552, AC002378, AL133243, AC007221, AL031657, AF227510, AL031602, AC006965, AC007314, AC003043, AC004884, AL031650, AL050317, AL020995, AC007225, AL133163, AP000104, AC004383, AC005696, AL049569, AC02542, AL035458, AC004887, AL023804, AF064861, AC002302, AC002400, AC004857, AC002549, AC008078, AJ003147, AL049745, Z98036, AC006312, and AC04526. | | |
| HDTDB37 | 8844 | 587699 | 1 - 719 | 15 - 733 | AA018755, AI332451, R45788, and AA247911. | |
| HDTDB21 | 8845 | 587700 | 1 - 699 | 15 - 713 | W57976, W58117, AA642370, and AC005332. | |
| HDTCC55 | 8846 | 934923 | 1 - 1574 | 15 - 1588 | W37285, AI680188, AI691024, AA258999, AA088201, AW410652, AI694271, AI016276, N76343, AI278104, AA496721, AI765185, AI078368, N54377, AW206705, AA708774, AI193198, AA708517, AA689584, AI467892, AA745781, AA189110, AA843476, AA258177, H65702, AA707076, AW071574, AI092665, N49617, W37798, AI240773, H73843, AA188896, H65703, AW075591, H73169, N68588, AI683084, AA279200, AI224604, AA894491, N46923, and AC007253. | |
| HDTCC01 | 8847 | 916455 | 1 - 660 | 15 - 674 | AI026818, AI144071, AI370045, AI311520, AI308578, AI334555, AI521589, AI952780, AA643261, AL080011, AA834534, AI862385, R81679, AA828045, AA360609, AA133293, AI671161, I90114, AI118912, T51942, AI560119, AA420729, T94072, AA809186, AI332671, AA535483, AW189804, AA721581, AW167720, AI679747, AL137705, AL110280, AC004883, AC004966, AL117337, AC004987, AL021393, AP000020, AC007390, AC002365, AL035420, AP000355, AC004686, AL137479, AC005086, AC004690, AL031732, AF113694, AD000813, AL022318, AF196779, AC005902, AC006561, Z77249, AL031984, AP000133, AP000211, AC007993, AP000504, AL035458, Z83820, AC006241, AC012085, AC005940, AF205588, AC005225, Z9297, AL022320, AC002314, AL031295, AC005920, AL033397, AC002563, AL121603, AC006059, Z83838, AL034400, AC005291, AC002477, AC007172, AC007308, AF109907, AL035461, AL035587, AL049795, AC005015, AI049872, AC002312, AL035407, U91323, AC000026, AC006112, AC005320, AL034417, AF179633, AL031230, AC007262, Z96074, AF042090, Z94721, X87344, AC003101, AP000344, AF196972, L78810, D84401, AL022316, AL022165, AL021155, Z49258, Y07848, Z92542, AC005924, AF095901, AC004560, AC005527, AB023053, AC002287, AP000556, AC002527, AP000250, AP000030, AC006236, AC004822, AC004841, AC016027, AC004513, U95739, AL021407, U80017, AC005911, AC020663, AL117339, AC005207, AC005488, AC004659, AL031281, AC005670, AL023284, AF129756, | |

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| | | | | AC002558, AP000130, AP000208, AL034374, AL050318, AP000045, U85195, AP000247, AC004943, AC003950, AL031289, Z85987, AC004191, AC005820, AF024533, AL031228, AE000658, AC007030, AJ003147, AC018767, AC004797, AC006504, AC007656, AC005088, AC005081, AL096774, AC002072, and AC005229. |
| HDTBZ83 | 8848 | 842950 | 1 - 441 | 15 - 455 |
| HDTBV06 | 8849 | 935393 | 1 - 476 | 15 - 490 |
| HDTBU73 | 8850 | 764410 | 1 - 707 | 15 - 721 |
| HDTBT35 | 8851 | 706730 | 1 - 786 | 15 - 800 |
| HDTBS91 | 8852 | 789425 | 1 - 541 | 15 - 555 |
| HDTBS45 | 8853 | 591589 | 1 - 450 | 15 - 464 |
| HDTBR39 | 8854 | 705350 | 1 - 768 | 15 - 782 |
| HDTBP84 | 8855 | 783024 | 1 - 488 | 15 - 502 |
| | | | | AA460387. AI767149, AA494182, AI927682, N74958, W05656, AA603309, AA747756, AI249573, AI433008, N49368, AA486131, AA349927, AI271126, AA661921, AI040342, H71429, AA279421, AL041619, AA490183, AL138455, AA838190, AI345157, AA584805, AI284640, AA618452, AW275510, AA984295, AA834707, AI270117, AL037683, AI694130, AW084466, AI963720, AA635739, AI580250, AI687343, AI700109, AW023865, AW069769, AI583283, AI953275, W45625, AW302903, H52274, AW102846, AI370074, AL045053, AI307608, AA634889, AI696962, AW08846, AA747070, AA584692, AA216412, AW264934, AI119713, AA101689, AW021735, AA179045, AI042420, AW024042, AI027459, AW169038, AI084294, AI821494, AA613397, AA613591, AI031973, AI950983, AI217937, AA493695, AW235497, AW072487, AA584167, AI393931, AI305766, AI744826, AI805363, AI217936, AW163293, AW168618, AI046205, AF034184, AI370094, AW021597, AI431303, R24887, T41247, AA601673, AL038705, AW263415, AA811710, AI799642, AW149156, AC004030, AC004626, AC005066, AL049766, AF091512, AL021707, AC006041, AC002067, AL109865, AL080250, U95742, AL121603, AC003691, AC004933, AC005914, D83989, AL031665, AP001172, AC003101, AC004979, AC007590, AC005541, U02531, X55925, AC003354, AP000228, AC003119, AP000140, AL078604, Z82210, AC006155, AL035410, AP000088, AC006459, A67988, U67231, AF135028, Z69666, AF061032, AC006537, AC004232, AL031300, AC005387, AC004204, AL035402, AL035462, AC004940, AC008168, AC003692, Z98046, AC004901, AL008728, AL023755, AL121591, AC002564, AI022322, AC005998, AL035608, Z78022, AL035659, AL049544, AC007043, AL022163, AP00365, AC004987, Z98753, AC004028, AC004130, Z86061, AF227510, AL034452, AC003075, AC005026, AC004638, AC005048, AC003683, AP000548, AL096861, AC003977, AC004592, Z94721, AC004861, AL049649, AC004069, AL031904, AC002430, AC004691, AC004690, AC006998, Z84469, AC006058, AL031311, AC008033, U91326, AC007214, AF042090, AC006512, AC005242, AC006213, AC002549, AC005220, AL023384, AC010202, AC007384, AL049834, AC010170, AC007514, AP000962, AL133445, AC006045, AL031123, AC005291, AC007298, AF001549, AC006288, |

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| | | | | AL031985, X53550, U67830, AF015147, U04355, AF162270, AB012179, U67801, M37551, U67832, AF015153, U67217, U67222, U67230, AF015151, AL050097, Z79422, U67226, U02531, AL132712, AF077058, U67233, U67230, AF015151, AL050097, Z79422, U67226, U02531, AL132712, U67229, X88791, AF088035, U71148, AL031681, AP000359, AL024508, AP001040, AP000088, AC004647, U02532, U67235, L78833, S83362, Z96074, AL121655, AJ246003, Y09781, U89335, AL110120, AL136295, U67228, U67227, S56773, AL031276, AL031255, AC007308, AC004920, AL110172, AC007385, AL121658, AL035652, AC009330, AC006265, AF012654, AC005071, A67988, AC004678, U67216, X14448, Z86090, AL109984, Y18000, Z82244, Z74739, AC001163, AC002563, AC002094, AC008012, AL132800, AC006270, Z99754, AC004882, AC003101, U43572, AL031283, AL133241, AL008719, AC005264, AL096765, AC005567, AC016830, AC007387, AC006515, AC006409, U38676, AC007774, AC007350, AP000103, AF069508, U91326, M96868, AC002564, AC005529, AC005102, AC005844, M37547, AL023553, AC004152, AF017257, AC005231, AC002375, D26163, AC007014, S83170, AR042836, AC000052, AC009247, AL034451, AC004002, AL096701, AC004652, AC004000, AC002316, AC016027, AC002126, AC004751, U38669, AL034417, U90546, AC004858, AL023807, AP000008, AL031588, AC005180, AC004671, AC006251, AC005785, AC004922, AL009181, AC005846, AC004099, AC005039, AC005933, AL133276, AL009031, AC008040, AC009510, U62317, AC004972, AC002430, AP000704, AC002326, Z82190, AC009542, AC004019, AC003664, AJ225085, AL135746, AC005781, AC005781, AC003682, AC006432, Z49816, AC004673, M84472, AL035072, AP000555, Z83844, X98173, S43650, AL122023, AL121769, U78027, AC006002, AC007384, AC004149, AC004794, AC004777, AL031844, AC004216, AL049780, AP000300, AL1021977, AC005081, AC005182, AC007055, AF199339, AF111167, AC005899, AL136504, AC005754, Z98050, X98172, Z83840, U66059, AP000249, U52112, AL023494, AC006252, U32576, AC005745, U91985, AC005908, AF001549, and AL031668. |
| HDTBG80 | 8859 | 916167 | 1 - 821 | 15 - 835 |
| | | | | AA075174, AA780368, AA608609, AA116112, N23422, AA426183, AA919127, AI051104, AA778513, AA861163, AI263419, AA844710, AI308998, AI016753, AI146269, R89012, AA875826, AI334311, AA832331, T66141, AA890409, AA594107, H57164, W47366, W93467, AA447722, AI276282, T58760, AA805142, AI150612, AI660146, AI271554, AI306121, AI911815, AI223452, AA417020, N56558, AA553689, AA424729, F09765, AI193223, AA972680, AI707534, AA748812, AA860315, AA116113, AW136275, W47365, AA740503, AA447882, AP000223, AP00085, and AP000086. |
| HDTBD67 | 8860 | 899636 | 1 - 2233 | 15 - 2247 |
| | | | | AW242597, AW069086, AI148152, AI125778, AI431242, Z99396, AW392670, AI044652, AA362688, AI134524, AA362689, T29199, AA362690, AW372827, AL119522, AI432646, AL119457, AL119324, AL119319, U46351, AL119401, AI431305, AL042551, AL119484, AL119391, AL043019, U46350, U46347, AI037205, AW384394, AW363220, AL119418, AL119497, AL119355, AL119363, U46349, AL119439, AL119443, AL134525, U46341, AL119444, AL119483, AL119341, AI142139, AL119396, AL134536, AL042544, U46346, |

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| | | | | AI142137, AL134527, AL119335, AL134902, AL134526, AL119399, AL042896, AL119496, AL134538, AI142132, U46345, AL042542, AL042614, AL042450, AL042984, AL042965, AL042975, AL043029, AL043003, AL119464, AR035224, A94045, A94046, A94054, AR038307, AR038321, AR067734, I25027, AR054109, I44515, I26928, I26930, I26927, I25041, I44516, AR009151, AR027099, I85513, AR009152, AR019098, I05393, A10617, AR028792, A01324, A01323, AR034783, I63120, AR067733, A32110, AR064322, AR064323, AR064320, AR064321, A94048, A94061, AR067731, AR067732, I05430, A70359, AR019094, AR028791, AR028793, A92666, A92668, I49890, A92667, A83642, A83643, A92665, AR020199, AR020200, AR001287, AR020198, AR020197, I89986, AR029418, AR029417, I09121, AR068508, AR068510, AR068509, I91969, A29109, A32111, AR068550, A23373, AR068551, I58322, I58323, I07209, I07249, A63954, AB026436, AR066494, I09252, I09251, E01324, I08638, AR055065, I66498, I66497, I66496, I66486, I09270, I09268, I09269, A49701, I66495, I66494, A27169, A27170, A39929, A83151, I09267, I66487, A42964, Y17793, Z57961, AR051537, AR051524, AR069079, A30600, AR054110, AR060234, AR055066, and A81671. | |
| HDTAU14 | 8861 | 658429 | 1 - 219 | 15 - 233 | H91918, AL137201, and Z84572. |
| HDTAT80 | 8862 | 911928 | 1 - 2399 | 15 - 2413 | |
| HDTAP53 | 8863 | 728216 | 1 - 338 | 15 - 352 | H48102, W39066, N57359, H53255, H63515, H70625, N54141, R96510, N57848, R97064, AI653538, AA745302, AA802532, AA808982, AA338193, D82544, T63054, AA373861, F08866, AA579188, AA356249, AA295039, AI270177, AA282951, AA525379, AA297698, AW419389, AA018517, AI917132, AA308598, AA9753894, AA805018, AA715418, H86665, AA808847, AA568314, AA055987, AW243384, AA481887, AA180781, R96427, A1336026, T50251, AA808843, AA610433, R48980, AI918419, AA411590, AA909816, AI273148, AA678845, AA420691, AI742168, AA583579, Z97053, AC006011, AC007225, AP000555, AC005412, AL109758, AC006449, AL049569, AP000087, AC002425, AL024498, AL133448, AC005874, AF134471, AL117258, AL031291, AC007308, AC005753, AC006088, AC004408, AC000085, AL021920, AF196969, AC005399, AI109984, AC005071, AC004883, Z95152, AC010202, AC007066, AC007388, AC005330, AC002369, AL049694, M89651, AC005632, AC006130, AC008040, AC005048, AC002350, AC007637, AL009178, AL133163, AD000092, AL121769, AC002300, AC004805, AF172277, AP000694, AC005011, Z83844, Z83826, AC004933, AB023049, AC005696, AL021154, U80017, AC004996, AC002351, AL035072, AC008126, AC006001, AC008928, AC007917, AF001550, AC003533, AC005089, AC004841, AC005520, AC005726, AC005009, AC005828, AF165926, AF001548, AC002059, AC006160, AL109801, AL031003, AC004985, AP000700, AC005480, U85195, AF107045, Z97832, L78833, AL035417, AL022311, AL132712, Z84469, AB000882, AL031311, AC004019, AL022238, AL031666, AC006312, AB016897, U52111, AC004560, AL022343, AL035587, AC004922, AL049795, AC007860, AC002040, AC004851, AE000658, AC004447, AC007565, AC005037, AL133245, Z84466, AL031848, AC004000, AL121825, AL136295, AC004967, AP000269, |

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| HDTAH15 | 8864 | 840327 | 1 - 703 |
| | | | 15 - 717 |
| | | | AA151989, AA053806, AA877780, AI90954, AI761757, AI884981, AI359275, AA883559, AA029799, AI334302, AI927450, AI885711, AI401339, AI418850, AW089486, AI147258, AW007192, AW291421, AI423057, H92988, N21120, AA115357, AI400311, AA114858, AI052732, W78047, AA291538, AI222211, AI568379, AI887327, AA526168, AA827153, AI127813, AI2351870, AI458414, AI222211, AI568379, AI887327, AA479087, AA114856, AI082454, AA993306, AA419256, AA977759, AA885007, AI689072, AI085769, AA401889, AI225066, AA115236, AI359661, AI289273, AI582790, AI569549, H37803, AA193281, W81178, AA115458, AA293486, AA953381, AI084597, AW438966, AW300931, AA152074, H80087, AA115479, Z39506, AI423394, AI095106, AA916116, T79202, AA428124, AA479241, AA256520, AI571788, AA778279, AI474234, R94519, AA114855, AA634164, AA114857, W79466, AA593584, AA992871, AA031498, AI659464, AW339599, AI868579, AA614435, AW169783, T30237, AA035792, R06984, AA258598, H78840, T30871, H94218, R93668, AI873150, AA031544, AA1828773, and AI953237. |
| HDTAE60 | 8865 | 810259 | 1 - 306 |
| | | | 15 - 320 |
| | | | AA905241, R07845, AA484618, AA876674, AA927025, AA969580, AW015956, F27760, AI560279, AI077875, AA657632, AW274260, AI130748, AA531437, AA926970, AI344732, AI039009, AI832645, T25895, AA664996, AI309287, AA244132, AA541603, AW363453, AW363455, AW373552, AW373548, FW363452, AI150756, F30920, AI289147, AI537640, W80487, AA780729, AA603795, AA864997, AA524049, AI023676, AA947143, F20520, AI911004, AI000638, AI283651, AA704855, C04467, AA694524, F22719, AA534561, AA694164, AA627396, F27644, D59538, AA318284, F33783, F33364, AI686496, F27676, AA903996, AA244131, F35313, AW373558, T74772, F33405, D51606, AW363451, AA730436, AI749712, AW363456, F30071, AI708982, F245555, N80149, F27522, R98804, AA317435, |

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|---------|------|--------|----------|--|
| | | | | F30100, F34894, F22313, F35771, F33982, AW373549, AA096277, AA327732, AC008044, and AC008372. |
| HDTAE44 | 8866 | 799902 | 1 - 397 | 15 - 411 |
| HDTAE29 | 8867 | 780991 | 1 - 435 | 15 - 449 |
| HDTAE16 | 8868 | 661997 | 1 - 425 | 15 - 439 |
| HDTAE09 | 8869 | 799874 | 1 - 404 | 15 - 418 |
| HDTAB89 | 8870 | 786039 | 1 - 383 | 15 - 397 |
| HDTAA31 | 8871 | 937609 | 1 - 1420 | 15 - 1434 |
| | | | | AJ219793, AA629254, AW104724, AJ567846, AJ590227, AJ439717, AJ568855, AW148320, AW151485, AL036361, AI538716, AJ702068, AJ828731, AJ445025, AJ538829, AJ536638, AJ637584, AW132056, AI890833, AI926790, AJ432969, AJ564719, AJ811344, AJ619502, AJ802542, AW026882, AJ538259, AJ079963, AW103371, AJ433157, AJ702073, AJ866801, AW262565, A1815855, AW198090, AJ269862, AJ269205, AJ801766, AJ634737, AJ047763, AJ249257, AJ624206, AL038605, AJ921248, AJ696612, AJ274508, AW149869, AJ043981, AJ811697, AJ627360, AJ491852, AJ889376, AL043326, AJ682841, AJ524671, AW008048, AW087445, AJ349004, AJ1249323, AJ1274541, AW268220, AJ439745, AJ499393, AJ872711, AW301505, AJ480118, AL040243, AJ1287489, AW085799, AJ783504, AJ620284, AJ612913, AJ559296, AJ569583, AA470491, AJ1254731, AJ677796, AL036396, AW301409, AJ500523, AJ580984, AJ431327, AJ521012, AJ284484, AJ625079, AJ590128, AW071349, AJ800453, AW071417, AJ570909, AJ440239, AJ537303, AW087207, AL036146, AJ635461, AJ045266, AJ648509, AW403717, AL036403, AJ610756, AL135661, AJ45432, AJ571909, AJ308032, AJ922901, AJ1284131, AJ340582, AJ702406, AA225339, AJ591316, AJ045500, AW118398, AW274192, AJ269696, AJ1819326, AJ560099, AJ446628, AJ633419, AJ289937, AW086113, AJ036802, AJ687728, AW090013, AJ815232, AJ758437, AJ539780, AJ567128, AJ500706, AJ250293, AW148363, AJ224992, AJ799199, AJ554427, AA508692, AJ818683, AJ801544, AJ499463, AJ590999, AJ952360, AJ636445, AJ273048, AW118512, AW131954, AW149851, AJ539771, AW196141, AJ612920, AJ567351, AJ554484, AJ868831, AJ912866, AJ571551, AJ690312, AJ270707, AJ275175, AJ281837, AW238730, AJ281779, AJ570384, AJ349772, AJ857296, AJ537677, AW002342, AJ590120, AJ475451, AJ569616, AJ571861, AJ433976, AJ702433, AJ572787, AJ273142, AJ282281, AW082040, AJ609593, AJ673710, AW075351, AJ925156, AJ886753, AJ612759, AJ281762, AJ869367, AJ784252, AJ349933, AJ800433, AL121463, AW075413, AW166903, AW075667, AJ500077, AW051258, AJ349645, AJ038565, AJ624084, AJ498579, AJ45165, AA427700, AJ866002, AW148408, AW166583, AW268251, AW080327, AW169653, AJ648684, AJ634345, AJ610645, AJ491897, AJ038779, AW074993, AJ349614, AJ690480, AJ521040, AJ866608, AJ343112, AJ580190, AJ920968, AW169132, AW195968, AJ348897, AJ862144, AW268253, AJ567612, AJ349598, AA835801, AJ925196, AJ097410, AJ1312152, AJ687127, AJ636719, AJ539153, AL036265, AJ345735, AJ312428, AJ431975, AJ630928, AJ687362, AW075084, AJ134259, AJ950664, AJ349937, AW073270, |

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|---------|------|--------|---------|--|
| | | | | AW089572, AI271786, AW129659, AI610690, AI307708, AI043293, AI500659, AI921379, AL044207, AI753683, AF090901, I89947, I48979, AF090934, A08913, I89931, A08916, S78214, Y11254, AL050116, X82434, AF113013, AL133557, I48978, AF090903, AF113690, AF106862, AL133016, AF078844, AL050393, AF104032, AF113689, AF111851, E03348, AL137459, AL122093, AF113699, AF113019, AF113694, AL117394, AF113677, AL137557, Y11587, AR059958, AL110221, AL117457, S68736, AL117460, AL050149, AL133093, AL133080, AL133640, X84990, AF091084, AF113691, AL110196, AJ000937, AL049314, AL080124, AL137527, AL122121, AL133075, AF125948, AL133565, U42766, AL122050, AL080060, AL050108, AL050277, A93016, AL049452, AF090900, AF090943, AB019565, AF158248, L31396, AL096744, L31397, AF118064, AF118070, AL049466, AJ242859, AF017152, AF125949, AF113676, AL050146, AL080137, AL133606, X63574, Y16645, E07361, AF090896, AF146568, AL133560, AL050138, AF079765, AL049938, AL122123, A65341, I49625, AL110225, AR011880, AF177401, AL137550, AL137283, U91329, E02349, AJ238278, A08910, AF017437, AL117583, A08912, E07108, X70685, AL049464, AL049300, AF097996, AL049382, Z82022, AL117585, U00763, AL049430, A08909, AL137271, AL137538, AF067728, A77033, A77035, A58524, A58523, AF118094, AL117435, U35846, AL133113, AF183393, AL122098, AL137463, X65873, AL050024, I33392, AL137648, AF087943, AL122110, X72889, I03321, U80742, U72620, AL049283, A12297, A03736, X96540, AL080159, AL137476, X93495, AL080127, U67958, I09360, X98834, AR000496, U39656, AF061943, AL110197, S61953, AF111112, AL133568, AL133072, AJ012755, AF095901, AL137523, I42402, AL137521, Y09972, I66342, A93350, E08263, E08264, AC006336, E15569, AF026124, Z37987, A08911, I00734, E00617, E00717, E00778, AL137560, I26207, AF119337, AC004093, Y14314, I17767, AF153205, AF026816, AR038969, AL133077, AL050172, AF185576, AL133104, AR013797, AL137429, AF003737, AL117440, AL110280, AL137526, Z772491, M30514, AJ006417, AL122049, AC004690, AL133014, AF106827, AF057300, AF057299, AF162270, AR038854, AL133067, AL137556, AL122111, AF079763, A07647, AF000145, AL117432, AL137533, U58996, AC004200, U96683, X83508, AF100931, E05822, L30117, AL080074, AC010072, AL137539, AF061573, E02221, AL137480, A45787, AF008439, E04233, U68387, E06743, AF118090, AF067790, AL133098, AF111849, Y07905, AF081197, AF210052, AL137478, U49908, X62580, AL122118, X87582, AC006371, AL080158, E08631, and AF100781. |
| HDRAC08 | 8872 | 963325 | 1 - 436 | 15 - 450 |
| HDQPR06 | 8873 | 936658 | 1 - 815 | 15 - 829 |

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|---------|------|--------|----------|-----------|---|
| HDQPP57 | 8874 | 926953 | 1 - 711 | 15 - 725 | T73087, AI119313, AI335529, AA774869, AI291928, AI338925, AF112221, and AB020678. |
| HDQJI08 | 8875 | 958252 | 1 - 456 | 15 - 470 | H80171, AA971126, and T80926. |
| HDQHU84 | 8876 | 782202 | 1 - 431 | 15 - 445 | AA010427. |
| | | | | | AW135842, AI185102, AI521545, N71336, AI374790, AI093509, H47630, AA580199, AI870424, AI935765, AA973252, AI538850, AI249946, AI909661, AI679550, AA514684, AW167422, AI687482, AW026905, AI933992, AI432570, AI684164, AI370322, AI440444, AI591407, AI250627, AW075921, AI817543, AI610318, AA243996, AW366372, AI963191, AI954721, AI242931, AI356929, AI270039, AI890391, AI570264, AW152415, AI089970, AI921746, AI679214, AI570857, AW089932, AI491904, AI624693, AI803740, AI682121, AI539800, AW265004, AW166612, AW090102, AI446785, AI811912, AI830187, AW105665, AW167215, AW192461, AI439903, AI918370, AI046942, AI365256, AI687568, AW236186, AI922996, AI309589, AI685822, AI630947, AI829893, AI952306, AW131994, AI783569, AW020480, AI689614, AW170773, AW168503, AW163464, AI758988, AW008085, AI680498, AI653402, AI540179, AI470293, AW082532, AI569616, AW169234, AI582900, AW104117, AI539687, AW088438, AL117635, S78453, AL133557, AI159615, I80062, S61953, I66342, AL137547, AL137298, U89906, AB007812, AB025103, AF114784, AL137471, AJ003118, AF182215, AL117648, X89102, AF194030, X59414, X84990, AI133559, AF109683, AL133113, E08517, E15582, A21103, AF131773, Y08864, AF081197, AF081195, L10353, S77771, AL080159, AF192557, AL133062, AF061981, AF207750, A08915, A18777, AR029580, U70981, I22020, AL137294, E01963, AF114170, AL133084, U753738, AL137268, AB028451, AF106945, AF000145, AF028823, AF065135, AF132676, AF20416, AF061836, AI117443, X62773, AR038969, AL080148, AP000083, S78214, AI137539, and N71386. |
| HDQHO94 | 8877 | 793387 | 1 - 114 | 15 - 128 | AA211827, and AA256750. |
| HDQHJ04 | 8878 | 926978 | 1 - 630 | 15 - 644 | AA592982, R17976, AI014353, AA584604, AI982975, and AW206259. |
| HDQGW10 | 8879 | 963512 | 1 - 464 | 15 - 478 | AW207166, R62452, AA570462, AW131259, U95742, and AC007216. |
| HDQGF78 | 8880 | 772952 | 1 - 546 | 15 - 560 | R83407, and AC003086. |
| HDQFT10 | 8881 | 852587 | 1 - 685 | 15 - 699 | AA864468, AI733017, and AI791415. |
| HDQFJ39 | 8882 | 852593 | 1 - 805 | 15 - 819 | AA765774. |
| HDQFE93 | 8883 | 791724 | 1 - 1181 | 15 - 1195 | T75255, H82395, R21558, H15880, F12818, Z42224, R13241, and F12817. |
| HDQEX85 | 8884 | 875473 | 1 - 495 | 15 - 509 | AA002220, H63472, AA307783, AA514353, AA584604, AI982975, and AW206259. |
| | | | | | C04105, AA481986, U47346, R10969, T49897, and AL096740. |
| HDQEW83 | 8885 | 780551 | 1 - 582 | 15 - 596 | AA128013, AA128008, AA128056, and AA128032. |
| HDQEW11 | 8886 | 966126 | 1 - 316 | 15 - 330 | AA525048. |
| HDQET29 | 8887 | 852618 | 1 - 459 | 15 - 473 | T70748, AA584765, H863388, A1801563, AW167773, AA662629, AA572718, F27846, AL031427, Z97630, AI050318, AC007308, AL035423, AL109628, AC006121, D79206, AF053356, AC005255, AC006064, AC005592, AC005102, AJ239325, AC0005971, AL035443, AL132777. |

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| | | | AC004228, AL022316, AL121595, AL021391, AL021578, AC005361, AL096817, AC001052, AC007899, AL008582, AC005844, AL031670, Z81002, AP000688, AP01052, AC005377, AC005527, AL031295, AC007546, AC006312, AL049761, AL078602, AP000504, AC012627, AC005516, AL034553, AL022313, AF111169, AC006985, AC004985, AC002347, AC005529, AF129756, AC005412, AC002470, AC003109, AC004254, AC006453, Z99716, Z83822, AC004253, and AC005610. | |
| HDQEQT0 | 8888 | 963533 | 1 - 618 15 - 632 | AA558617, AA825712, AA806536, AI537533, AI336120, AA506386, AA721171, AA559219, AI754064, AI754257, AL041375, AI086603, AW148507, AW069227, A933714, R22196, D29248, AI623764, AI283329, AA233462, AA113757, AA584125, AA714110, N95424, H66812, AA127426, AA669155, AW245331, AW272606, AI300597, AI524360, AL037910, N23896, H29019, AI065031, AI738741, AI417496, AA347232, AI904840, AA608729, AC007151, AC004587, U37450, AC004797, AL021392, Z84488, AC004883, AJ009532, AJ006997, AC004955, AP000694, AC003962, AC005899, AC006441, AC004743, AL021155, Z95116, AL049570, AP000359, AC007227, AC005776, AC000159, AC005399, AC006511, AC006285, AC004887, AC006084, AC003109, AC005589, AC007637, AI035694, AC004821, AL031289, AC007226, AC004820, AC002316, AC005519, AC007263, AC005520, AL133448, AF053356, AC006948, AP001065, AC004799, AP000116, AL035450, AC000007, AC005781, AC002091, AC006111, AL049795, AC006538, AC004382, AC005081, AC004383, AC008055, AL031005, AL139054, AL031228, AL050321, AC002558, AC004583, AP000553, AC004225, AC009516, AL049538, AP000348, AC006101, AC003071, AL031584, AC002546, AL031282, AC020663, AC005225, AC005971, AC008126, AL035249, AC005164, AP000049, AC004031, AC006449, AC007688, AC007566, Y07755, AL031283, AC005940, AC004526, Z93244, AP00311, AC002429, AC005529, AL031293, U78027, AC007376, AC005280, Z86090, AC005800, AP000689, AC004148, AC004973, AF001548, AL121653, AC004019, AC007386, AL035422, AF064857, AC006014, AL121658, AL034553, AC005828, AC007055, AC004771, AL132641, AJ003147, AC003108, AC006077, AC004895, AC006241, AL049552, AC005288, AC006271, AC004703, U85195, AL078583, Z93023, AF111168, AC0049576, AC002310, AL031311, AC007040, AC005859, AC005484, AC005754, AC007066, AL049552, AC005512, AC002477, AC002398, AE000658, AL031427, Z81450, AL035458, AL050348, AL031058, AC005202, AL035555, AC004884, AC005521, AC004834, AC004927, AB022537, AL008710, AC006130, AC007563, AC005548, AL117354, AC005317, AC006581, AL034417, AC004686, AC005527, AC003663, AL031277, AL109952, AC005011, S67859, U80459, AC002126, AL022476, Z95152, AL109628, AC009247, AC001226, AL022329, AL049569, AC006536, AF030453, AC007536, AC004755, AL031280, AC005345, AC007868, AL035400, AC002369, AL031053, AC005667, AL031276, AL009031, AC002994, AP000502, AC002326, AL118510, AP000117, Z98036, AF134726, AC005088, AL135960, AJ131016, AC006486, U91323, AL035409, AL022322, AL049643, AC005486, AC005486, AC002036, AC003042, AL022313, AC008115, AL133353, Z98946, |

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| | | | | | AL035420, AC007030, Z95114, AL023575, AC004835, U73169, AC007707, AL022316, and AC002096. |
| HDQEJ46 | 8889 | 957666 | 1 - 411 | 15 - 425 | AW015127, AA767375, AA282147, AI431780, AL120806, AI581323, AI291483, AI050841, AA968963, AI949457, AI309633, AI434775, AI766201, AA130608, AI1359445, AI278918, AI445485, AA629098, AA262437, N72677, N21390, H96796, AW118308, AI770085, AI797434, N72690, N50924, W81605, AI371344, AA287019, W31464, R12476, AA694478, T99090, AW273672, H72374, D21015, AW059628, and AC003999. |
| HDQEF93 | 8890 | 791753 | 1 - 464 | 15 - 478 | AI820722, AI820696, AI732275, AI732300, AI478997, RS50557, R48764, and R48866. |
| HDQDX89 | 8891 | 786323 | 1 - 977 | 15 - 991 | N41950, and N33234. |
| HDQDT10 | 8892 | 963482 | 1 - 593 | 15 - 607 | AI078356, and AA889808. |
| HDQDG73 | 8893 | 761957 | 1 - 586 | 15 - 600 | W05421. |
| HDQDC74 | 8894 | 764985 | 1 - 323 | 15 - 337 | AI866951, AI339309, AI417802, AI126514, AI275133, AW138502, AA738256, AA732499, AI016178, AA157007, AI203233, and AJ006266. |
| HDPY008 | 8895 | 958454 | 1 - 520 | 15 - 534 | AI283860, and AA595438. |
| HDPXZ28 | 8896 | 686188 | 1 - 670 | 15 - 684 | AW002414, AA587218, AI337851, AW341392, AA016317, AW043859, AW148813, AI968429, AI370931, AI186481, and AI796475. |
| HDPXW88 | 8897 | 631133 | 1 - 344 | 15 - 358 | AA259064, AA657952, AI143075, AA594872, AI087206, AI149739, AI244822, AA725667, AA056110, AI093167, AI050824, AW024987, AI493689, AI200955, AA454906, AA400067, AA649907, AA436620, AI141148, N31844, AA132154, AA419249, AA402818, AA573258, AI074184, T61071, AA994420, AI339724, AI094655, D80744, AI160520, AA210767, AI885410, AA652366, H19641, AI365036, AI884689, AA733140, AI621277, D80807, AA018419, AA631598, H41099, AA626841, AA579798, AA861445, AI150344, W58172, AA812861, AA041404, H20476, AI339583, AA954727, AA324170, AI372711, AI817408, AA948293, AA507208, D80745, AA400850, AA320028, AA534640, AA534821, N72499, AI380715, AA779645, AA830821, AW023338, AW022102, N67350, AI334895, AI560683, AW020693, AI312210, AW269097, AI336513, AI348895, AI336495, AI048323, AW022682, AI59752, AI048340, AW071417, AI047422, AI310930, AI888621, AL037454, AI048644, H41759, AA572758, AI310940, AW104056, AI340603, AI288285, AI538764, N22276, AA420722, AW162189, AW020095, AW021717, AI538885, AI040586, AI048323, AW022682, AI59752, AI048340, AW071417, AI047422, AI348854, AI567582, AA291456, AL036832, AL039086, AL038564, AI690536, AI307557, AI336633, AI554343, AI345567, AW058233, AI312353, AI887775, AW020710, AA421957, AW071362, AI036274, AW084056, AI349256, AI344935, AI312152, AI307494, AI310575, AW268072, AI335363, AW403717, AW075084, AI340627, AI310925, AI538850, AI312399, AI349937, AI045620, AI334884, AI307543, AI340533, AI348897, AI345251, AW071412, AI345143, AI689420, AI307708, AI345666, AI312325, AW071395, AI648567, AI340659, AW071377, AI311159, AI340511, AW059828, AI340644, AI345397, AI345397, AI334930, AI309443, AI307520, AI345688, AI349186, AW084097, AI340664, AI310592, AI307542, |

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| | <p>AI309391, AI345745, AI345739, AI345674, AA470491, AI312143, AI349637, AI344843, AI334920, AL040694, AI310927, AW020419, AL038605, AL047344, AI307578, AI349955, AW075093, AI349960, AI312432, AI312357, AI961589, AI921254, AL041150, AI312993, AI890507, AL037649, AW161579, AI312237, H89138, AL046463, AI377163, AI349622, AI636619, AW162194, AI349213, AA580663, AI114703, AW020397, AA042949, AI345347, AI119836, AI866465, AI039276, AI312428, AA493647, AA464646, AI702065, AI242248, AI267162, AI340519, AA468418, AI345415, AW238688, AI923989, AI254226, AI134999, AI433157, AI348917, AI345396, AI955945, AI473536, AI702073, AW131999, AI866770, AW152550, AL046618, AI690748, AA579232, AI567953, AI612750, AI799195, AI635382, AI885989, AL040011, AI446495, AI349276, AI540674, AI815232, AL080163, AI080234, AF058921, AI050024, AI117583, A08916, A08910, I89947, A08909, A08907, I48978, A08908, A08913, A08912, S76508, AF094480, AL133016, AL023657, AI137556, I89931, AF079763, X53587, AR038854, I49625, AJ010277, AL137658, AF090934, AF028823, A18777, AI050092, A03736, I89934, AL080074, AF090943, AL137560, AF118090, AF158248, AR059958, AI117416, AF114818, AI1050116, AF113013, S77771, X79812, M86826, E01314, A23630, AI133010, AI049300, AF111851, AI137550, AL110224, AL050138, AI137548, U49908, AI122110, AF113690, AF114170, AL049382, U58996, AL110296, AL117649, AF026124, A07647, AI117457, L04504, X63574, S78214, AL133560, E01573, E02319, AI080060, AF100931, AF126247, AF097996, AR000496, U39656, AF069506, X72387, U53505, I03321, AF113676, AI137558, AF008439, AL133113, Y07905, U42766, Y11254, AL049430, X52128, Z37987, S69510, AL080126, AI117435, AI137641, U35846, I89944, AB016226, AF113677, LI19437, S36676, AF067728, AF153205, AF000301, X96540, AF078844, Z72491, AI080158, X92070, AI133606, AI049465, AR011880, Y10080, S63521, AF051325, X70685, AL137271, AF200464, E15324, U68223, I92592, AI137529, AF090903, AL080140, AI117440, AI137656, AF016271, AI080137, U78525, AI133080, AF061573, D83032, U88966, AI137537, AI137276, AF169154, AI080086, AR020905, E04233, AF176651, AI137459, AL049452, U68387, AI050108, E15569, U51587, A58524, I48979, A58523, A15345, AL080124, A08911, AI133067, X87582, AI049347, AJ238278, AF017790, AI110158, AF090900, S68736, X57961, AF090896, AI137367, AI110222, AI137476, AI049464, AF113694, AI133558, AI242859, J05032, AI080127, AF061795, E08631, AF151685, AL110225, AI133568, AI117394, AI050155, AI05093, X93495, X65873, AJ012755, AF113691, A08915, AF026816, X81464, AR068751, X63410, S75997, AF091084, AF017437, X06146, Y16645, AF118094, AJ000937, AI122050, I33392, X80340, AR029490, AI080154, AF111849, AI117460, I17544, E06743, AB007812, AF090886, AI133075, M27260, A90832, U66274, AF125948, AF177401, AL122093, AF106657, AI096751, E01614, E13364, AI137521, AI137292, AF057300, AF057299, AI137479, AI110280, AF061943, AL110218, I68732, AF162270, X72889, I29004, E12747, AI137539, I80064, AI110171, AI117648, AR013797, AI050277, AI137283, AI137526, AF118064,</p> |
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| | | | | AL049283, Y11587, AF118070, U67958, AL110196, Y10936, AF113699, AF106827, II17767, and AL117585. |
| HDPXO03 | 8898 | 923602 | 1 - 624 | 15 - 638 |
| HDPXN01 | 8899 | 915919 | 1 - 461 | 15 - 475 |
| | | | | AI651231, AW196757, AA101088, W94251, AI627422, W94274, AA912880, AI093809, AI867562, H06521, and H20526. |
| HDPXL71 | 8900 | 760140 | 1 - 263 | 15 - 277 |
| HDPXD40 | 8901 | 974493 | 1 - 554 | 15 - 568 |
| HDPXD08 | 8902 | 958826 | 1 - 460 | 15 - 474 |
| HDPXC56 | 8903 | 974490 | 1 - 550 | 15 - 564 |
| HDPXB75 | 8904 | 786320 | 1 - 451 | 15 - 465 |
| HDPWX53 | 8905 | 727595 | 1 - 428 | 15 - 442 |
| HDPWT92 | 8906 | 791223 | 1 - 650 | 15 - 664 |
| HDPWR03 | 8907 | 923608 | 1 - 483 | 15 - 497 |
| HDPWN56 | 8908 | 733129 | 1 - 412 | 15 - 426 |
| HDPWK75 | 8909 | 793234 | 1 - 448 | 15 - 462 |
| | | | | AA038727, AI816786, AI935020, AI801846, AI928063, AR014046, AR014055, and AR014063. AF061938, AF061941, and AI132258. |
| HDPWH75 | 8910 | 956201 | 1 - 479 | 15 - 493 |
| HDPVC01 | 8911 | 915816 | 1 - 594 | 15 - 608 |
| HDPUW82 | 8912 | 921279 | 1 - 299 | 15 - 313 |
| | | | | R40075, R51621, AI141535, R46566, R37155, AI492408, AA970417, AA419023, H99298, AI669153, AA907293, AA811138, AA789986, AI825009, AI579905, H17653, R93326, R16181, AW070719, AA130206, AA745834, AI338136, AA365593, AA365604, R88755, AI824699, AI914066, AA448251, Z39123, R34299, AI808827, AP000298, AF039907, AP000044, and AP000112. |
| HDPUV65 | 8913 | 747646 | 1 - 831 | 15 - 845 |
| HDPUV11 | 8914 | 966558 | 1 - 632 | 15 - 646 |
| | | | | H08311, H29675, N99517, R11982, T80994, AA773218, AA569178, AL022345, AL049760, AC005011, AC008124, AC007857, AL080243, AC005295, U91323, AC005086, AC005067, AC002565, AL035458, AC011504, AC005800, AL031685, and AF047825. |
| HDPUR51 | 8915 | 914406 | 1 - 250 | 15 - 264 |
| | | | | AW06947, AI471968, AW249664, AW245944, AA720616, AI825610, AA931555, AA988285, AI076790, AW009565, AI217146, AI217151, AI934470, AI161265, AW194915, AI675557, AA883665, AA149768, AW027197, AA011403, AA975558, AI219393, AW173189, AA436569, AI150988, AI421887, AA669290, R45925, AI784385, Z21905, T69866, AW138299, AI560662, and AF093415. |
| HDPUN39 | 8916 | 957580 | 1 - 1806 | 15 - 1820 |
| | | | | AA703945, AI378007, AI887376, AI819938, AW118802, AW117265, AI023239, AA858163, AA836225, AA815054, N32787, AI304385, AI859862, AI810059, AA948491, AI393415, |

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| | | | | AA401439, AA227914, AI123750, AA227626, N48269, N48262, AA493142, AI300250, AI886088, AI263378, AA907185, AW022598, AA838276, AW377610, H96411, AW264818, T62948, N41789, Z36266, N69341, AA070247, AA922124, AW103346, H89278, A1868630, AA975708, H96049, D29240, AA887267, T62800, AW182089, AW183288, AA070204, A1915647, AA648350, and AA092069. |
| HDPUI44 | 8917 | 715971 | 1 - 707 | 15 - 721 |
| HDPT065 | 8918 | 747206 | 1 - 554 | 15 - 568 |
| HDPTL59 | 8919 | 739068 | 1 - 374 | 15 - 388 |
| HDPTE43 | 8920 | 715038 | 1 - 608 | 15 - 622 |
| HDPTD58 | 8921 | 735750 | 1 - 550 | 15 - 564 |
| HDPSW93 | 8922 | 973098 | 1 - 486 | 15 - 500 |
| | | | | AW162288, F13749, AI751162, AI696793, AW162489, AW270270, AI431434, AI537538, AI148277, AI859946, AI287651, AA601680, AA179706, AI268812, AA747375, C15897, AI266576, AA644320, AA708678, AA610491, AI500552, AI151261, AI120687, AA111870, AA127353, AW083934, AI305766, AI469796, AW062724, AI453233, AA284184, AI446638, AA604514, AW270258, T47739, AA657835, AI355246, AI291317, AA077776, AA135761, AI279165, AW194267, AI367361, H79308, AA578853, AA176605, AI243789, AW157005, T06828, AW193493, AA302980, AW192065, AA992126, AI445474, AI192631, AA814510, AI135643, AI028510, AL048616, AA226584, AI382614, T40612, AI696962, AW021583, AA297496, AA720732, AW069227, C14121, AA121919, AA484892, AI360514, AI568683, AI291124, AA071393, AI053786, AI358812, AL031670, AC002314, AC007055, AC005829, AP000248, Z98051, AF196969, AF129756, AP000504, U96629, AL080243, AC004453, AF114156, AC005484, AC004231, AP000556, AC002492, AC009946, Z99716, AC007546, AC002301, AC002544, AC007225, AL078477, AC005332, AL035072, AC006057, AC005668, U73634, AL080242, AC004655, Z93241, AC008372, AC005527, AF111168, AC005624, AL049795, AL096678, AC005940, U91326, AC007688, AC007376, AC004526, AP000505, AC004475, AC007536, AF134726, AC003041, AL121658, AC002400, Z98941, AC002300, AC006064, AL022237, AC004253, AC005377, AJ003147, AL035684, AC005529, AC004970, U47924, AC006312, AC004913, AC002351, AC007444, AP000160, AC018633, AC004874, AC005800, AC005755, AC004448, AF196779, AF047825, AC000026, AL031782, AC005696, Z82243, AI049636, AF053356, AL050308, AC006965, AC003037, AC009509, AC004125, AC005209, AC005821, AC005284, AI049766, AC006511, AC002059, AP000692, AC007298, AC007050, AC000025, Z85986, Z95116, AC004531, Z98744, AI078476, AL022329, AC006449, U62293, AC002470, AC005971, AC016831, Z82206, AC005740, AC004890, AC005237, AC002369, AC004617, AB000882, AL049776, AC003101, AC005288, AC004832, AC006441, AC004400, AC004381, AC012627, AC006468, AL031447, AL031283, AC006111, AC009516, U62317, AL022336, AC002045, Z98304, AC005182, AC004841, AC002996, AC007207, AL022476, AC007367, AC004796, AP000359, AP000117, AC006277, AP000087, |

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| | | AC003695, AC004955, AC002310, AC005071, AC005180, AC005796, AC004820, AC007934, AC004263, AL096701, AC005274, AP000502, AC005694, AL031295, Z95113, AL049869, AC004887, AL021808, AL022165, AC004983, AP000552, AL022311, AC005519, AL034423, AC005225, AL035683, AC007182, Z82244, AC005488, AP000511, AL031311, Z83844, AC004783, AL133246, AC005562, AC005839, AC007999, AC006130, AC002123, AC005954, AL121655, AC004996, AL132712, AC002312, AC002044, L44140, AC004765, Z84466, AF064861, AL033527, AP000347, AL035079, AC004000, AC005914, AC008928, AP000512, AL035587, AC007066, AC003982, AP000050, AC005082, Z758887, AC006450, AL121603, AC004686, AC007283, AC005722, AL022320, Z97055, AC005057, AC005702, AC005690, AP000557, AL049761, AC005358, AL049589, AL049759, AC004859, AC005632, AC002394, AC007262, Z82198, AC004814, AC0031407, AL121694, AC005609, AL049780, AC005531, AC007684, AC004962, AC007363, AL031407, AL121694, AC005609, AL009181, AC005815, Z97630, AC006946, AC004106, AC006211, AC000353, AP000346, AL049832, U91328, AC004408, AC005015, AC003035, AC004816, AC007537, and Z97196. | |
| HDP SW82 | 8923 | 779614 | 1 - 664 |
| HDP SL71 | 8924 | 969286 | 1 - 416 |
| HDP SK64 | 8925 | 746370 | 1 - 636 |
| HDP SK53 | 8926 | 727586 | 1 - 462 |
| HDP SJ13 | 8927 | 656729 | 1 - 401 |
| HDP SB10 | 8928 | 961309 | 1 - 432 |
| HDP SA86 | 8929 | 785293 | 1 - 440 |
| HDP RW01 | 8930 | 915993 | 1 - 511 |
| HDP RS89 | 8931 | 887682 | 1 - 464 |
| HDP RR24 | 8932 | 914667 | 1 - 398 |
| HDP RK07 | 8933 | 948672 | 1 - 380 |
| HDP RJ04 | 8934 | 909040 | 1 - 597 |
| HDP RE41 | 8935 | 712124 | 1 - 505 |
| HDP RA51 | 8936 | 725103 | 1 - 317 |
| HDP QV82 | 8937 | 779421 | 1 - 473 |
| HDP QR07 | 8938 | 952337 | 1 - 618 |
| HDP QI68 | 8939 | 955006 | 1 - 632 |

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| HDPPQH06 | 8940 | 934616 | 1 - 431 | 15 - 445 | AI652814, and AI122123. |
| HDPPQF03 | 8941 | 923120 | 1 - 810 | 15 - 824 | AI582755, R26237, R86322, AL042965, AL134518, AL119319, AL039912, U46351, U46349, AB021861, AF100318, A81671, AB026436, and AR043113. |
| HDPQC63 | 8942 | 744461 | 1 - 427 | 15 - 441 | H79008. |
| HDPPQA64 | 8943 | 872237 | 1 - 347 | 15 - 361 | AA135852. |
| HDPPP29 | 8944 | 690497 | 1 - 381 | 15 - 395 | AA430072, AI433439, AA534674, AC004190, AP000516, and AB014087. |
| HDPPPB17 | 8945 | 662917 | 1 - 374 | 15 - 388 | N28339, and Z75746. |
| HDPOX03 | 8946 | 923856 | 1 - 579 | 15 - 593 | AI056982, and AW062324. |
| HDPPOT78 | 8947 | 773487 | 1 - 905 | 15 - 919 | AI912571, AI911514, AI679788, N24178, AI313135, N78597, AW083974, Z30045, H92801, AI361253, D52266, H92790, AA639165, D61220, AI341193, AA565721, T23468, D60865, AI357528, D59892, AI702867, AI928304, and W07344. |
| HDPOP03 | 8948 | 923843 | 1 - 579 | 15 - 593 | N49161, and U61375. |
| HDPOC02 | 8949 | 919597 | 1 - 618 | 15 - 632 | AA122267, AA995018, AI677847, H06642, R16329, AI919166, AI611049, and AW235290. |
| HDPN173 | 8950 | 764407 | 1 - 593 | 15 - 607 | T56742, AA551532, AA169830, AL022336, AC006014, AC005488, AP000356, AC004765, AC004841, AC004770, AC004228, AL031670, AC005697, AI035455, AL031280, AL109865, AL03131, AC009509, AC005837, AL021878, AC004882, AC005484, AC005529, AC004974, and AC02407. |
| HDPPND09 | 8951 | 607575 | 1 - 555 | 15 - 569 | AA587005, F29968, AA525753, AI783911, AW261871, AI95464, AI476460, AA513484, AA584756, U78027, AL121603, AL035422, AC002350, Z95329, AC005046, AC006511, AL008582, AC006468, AL031431, AF117829, AP000111, AP000043, AL035587, AC005800, AC002126, AC004647, Z84480, AF088219, AL049780, AC007308, AC005793, AC009247, AL035415, AC007536, AL049776, AF001549, AL049766, AC020663, AC002477, AL031774, AF030876, AC004890, AC005480, AF196779, AC002312, AC007676, AL117339, AC007055, AF001552, AC004525, AC005821, AL035681, AP000359, AC003070, AP000509, AC007388, U91326, AC007151, AC005899, AL022313, AL034423, AL050318, L78810, AC005599, U91323, AF207550, AL024508, Z93241, Z98742, AL121653, AL031681, AL135744, AL009181, AL133245, AC005288, AF196971, AL132712, U52112, AC009516, AC005284, AL024498, AL049760, AL080243, AC005690, and AC005037. |
| HDPNCC22 | 8952 | 674539 | 1 - 881 | 15 - 895 | W90578, W90539, T86410, AI709138, AA890473, T79032, T86498, T85302, T79033, AI784127, T85514, and AB033024. |
| HDPMV35 | 8953 | 706647 | 1 - 386 | 15 - 400 | W20066. |
| HDPMR81 | 8954 | 493958 | 1 - 452 | 15 - 466 | AI700071, and AI651878. |
| HDPMH51 | 8955 | 725029 | 1 - 762 | 15 - 776 | H75594, H84078, H86134, and H84972. |
| HDPMG46 | 8956 | 934144 | 1 - 346 | 15 - 360 | AI073504, AA931246, AI420858, AA156986, AA806750, AI202536, AI796966, AI440318, AI299156, AI659218, AI147939, AI499692, AI088683, AI048596, AI337583, AI363844, N22539, AI470606, C06326, AW148877, AA253327, AI984272, AI052500, AI984788, H14210, AA284014, |

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| | | | AA281855, AI537677, AI379365, AI923989, AI537273, AI580927, AL119791, AI433157, AL045500, AI284517, AI364788, AI620284, AI539771, AI567993, AI801325, AI500523, AI434223, AI500706, AI500662, AW151138, AI909672, AI500659, AI445237, AI434256, AI269862, AI491776, AW083804, AI043981, AI633493, AI284513, AI888118, AI433037, AI872300, AI582932, AI909696, AI041150, AW088899, AI636719, AI433976, AI815232, AI121328, AI919345, AI889189, AI521560, AI610402, AW151136, AI064830, AI537617, AI494201, AW129106, AI889148, AI284509, AI888661, T06380, AI040243, AI285826, AI866457, AW087445, AI366549, AI436429, AI554821, AI041862, AI805769, AI633306, AI89168, AI589993, AI499920, AI119457, AI866573, AI805638, AI889133, AI499512, AI610362, AC005520, AL122110, and AI133080. | 15 - 581 | AA236014, AA236084, AA330056, AF149770, and AC004801. |
| HDPLU84 | 8958 | 782061 | 1 - 597 | 15 - 611 | R06132, and AC005746. |
| HDPLT62 | 8959 | 973945 | 1 - 796 | 15 - 810 | AW392670, U46341, AL119497, AL119443, AL119324, AL119396, AL119363, AL119496, Z99396, AL119484, AL119319, AL119457, AL119324, AL119396, AL119363, AL119496, Z99396, AL119484, AL119341, AL119391, AL119355, U46350, U46347, U46349, AL119444, U46346, AL119335, AL134920, AL134533, AL119439, AL119522, AL134518, AL134518, AL042614, AL134531, AL043029, AL042450, AL042995, AL043011, AL042544, AI142139, AL042542, AL043019, AI042984, AI042551, AL043003, AL119464, AB026436, AR054110, A81671, AR060234, AR066494, and AR069079. |
| HDPK178 | 8960 | 773469 | 1 - 404 | 15 - 418 | W88601. |
| HDPKA03 | 8961 | 923841 | 1 - 473 | 15 - 487 | AI434789, AW271602, AI813305, N26090, N67808, AI093649, W03392, N36730, AW394104, and AI263776. |
| HDPJX07 | 8962 | 952966 | 1 - 562 | 15 - 576 | AI085674, AA770353, and AI695338. |
| HDPPJ44 | 8963 | 716466 | 1 - 498 | 15 - 512 | AI770178, AI627506, AI916830, AW236927, AW299782, AI623168, AI347533, AA969417, AW002419, AI763247, AI299571, AI927189, AW136045, AI962542, AA428643, AW207242, AA778307, AI266564, AI334622, AI308144, AI824178, AI675224, AA931817, Z66819, and Z55542. |
| HDPJK23 | 8964 | 488326 | 1 - 342 | 15 - 356 | W52110, AB020679, and AF067777. |
| HDPIB19 | 8965 | 887886 | 1 - 279 | 15 - 293 | |
| HDPIA07 | 8966 | 953001 | 1 - 241 | 15 - 255 | AA021174. |
| HDPIW95 | 8967 | 933240 | 1 - 814 | 15 - 828 | AI217942, AA885223, AA909021, AA705902, AA306479, H91973, H89928, and AL135175. |
| HDPIV34 | 8968 | 703959 | 1 - 477 | 15 - 491 | AI12352, AI343988, H12300, R71296, and AC007283. |
| HDPIQ24 | 8969 | 771939 | 1 - 482 | 15 - 496 | H08480, AA580484, AA226996, AA406259, AA402365, and AL022334. |
| HDPIP06 | 8970 | 935198 | 1 - 570 | 15 - 584 | H70412. |
| HDPII73 | 8971 | 764344 | 1 - 328 | 15 - 342 | |

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|---------|------|--------|---------|----------|---|
| HDPIL01 | 8972 | 916221 | 1 - 330 | 15 - 344 | <p>AA515728, AW328331, AI733856, AW069227, AA714110, AI634187, AI133083, AA630854, AA904211, AI754170, AI708005, AI457313, AI866971, AW069412, AA668587, AL044966, AI216990, AI791720, AI791408, AI439910, AA629731, AI049845, AI431513, AI1224583, F24745, AA676592, AI889579, AI421257, AL121287, AA714011, AI627185, AA658918, AI187148, AI887235, AA614163, AA458452, AI066646, AW089625, AW083934, T74524, AA595499, AW265279, AA503298, AA483606, D44672, AA570740, AA513551, AA218684, AA513851, AI049643, AA654038, AI277783, AI049630, AI890297, AW338376, AA601230, AA568204, AA171400, AI912401, AI828555, AI733523, AA297802, AI801563, AA507814, AW188742, AI536834, W02749, AI633386, AW104163, AI905408, AI635609, AP000350, AC005696, AL031664, Z84469, AC004066, AC004985, AL034344, AL109627, AL121653, AC007298, AC006050, Z68322, AP000252, AI109952, AC005031, AP000044, AP000112, AC000075, AC003007, AC004000, AL035079, AP000212, AP000134, AC007277, AF053356, U80017, AP000031, AC005632, AI133448, AC004605, Z98200, Z81364, AL035086, AF109907, AL133246, AL034423, AL121655, AC002314, AC006208, AC004893, AC005005, AL031848, AC005409, AL096701, AL133163, AL109628, AC005232, AC005228, AF134726, AC007934, AC001228, Z97055, L78810, AC005664, AL049650, AP001053, AC006079, AL031589, AC005527, U47924, AC005701, AC005606, AL034429, AC005206, AC006162, AC003042, AC005602, AC004098, AC002364, AC006547, AC006080, AC006449, AC005529, AF191071, AC005722, Z98048, AC005082, AL020997, AP000116, AL050307, AJ003147, AC004033, AL031673, AP000008, AC005667, AC003043, AC005484, AF196972, Z97632, AL008730, AF129756, AP000248, Z83840, AP000065, AC004796, AC006088, AL024507, AC005412, AL080250, AC002476, AC002553, AC005837, AC005500, AC004821, AC005971, AC007226, Z84474, AC006441, AC004805, AP000326, AC004841, AC005933, AP000054, AP000169, AP000122, AC005726, AC005822, AC005071, AC005911, AP000211, AP000133, AC004966, AC010205, AC004884, AC005800, AC003982, AC004552, AC002120, AL008582, AC005618, AL031846, Z98950, AC000115, AC005637, AL049540, AC007227, AC007540, AP000057, AP000049, Z83838, AP000501, AP000503, AC002477, AC009247, AC006084, AP000311, AF207550, AL035457, AL139054, AL035690, AC005331, AC007688, AL035659, AC005695, AC002470, AP000365, AC004895, AC004967, AL022336, U91327, AC002350, Z93017, AD000092, AC005003, AL049776, AP000299, Z93930, AP000103, AC006057, AC002312, AC004962, AL031283, AL031311, AC006487, AC006581, AL035405, AL031276, AC005057, AF111169, AI021453, AC006130, AC007637, AL133355, L78833, AL031778, AC004019, AI236701, AP000692, AC005089, AC005531, AL096766, Z98051, AC008040, AC004663, AC002551, AL031864, AC002306, AC004752, AC005779, AC002563, AL049734, AC005740, AP000045, AP000113, AC005015, Z98044, AC007057, AL049872, AC003108, AL117338, AC004150, AC005900, AC007160, Z83844, AC006512, AC005859, AC005944, AP000688, AC006360, AI251973, AL050318, AP000504, AL121769, AL096791,</p> |
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| | | | | | AC008115, AF045555, AL034402, AF001548, Z95113, AL049856, AC007376, AL034379, AC004851, AL035458, AL049694, AC005231, AC006511, Z82206, and AF001549. |
| HDPIDF78 | 8973 | 881960 | 1 - 347 | 15 - 361 | |
| HDPIDF66 | 8974 | 750575 | 1 - 431 | 15 - 445 | R73297, AI287533, AI279683, U75370, and AC004449. |
| HDPIDF54 | 8975 | 729441 | 1 - 556 | 15 - 570 | H10868, and AL031681. |
| HDPIDD88 | 8976 | 415993 | 1 - 409 | 15 - 423 | |
| HDPID53 | 8977 | 728058 | 1 - 416 | 15 - 430 | AA513893, AW410354, AW148507, AW191886, AA679532, AA099222, AA320279, AI168661, AA954641, AA610219, AI627917, AW027660, AA476495, AP000217, AC002422, AP000339, AL133321, AL078603, AL035090, AC005593, AL035691, AI024498, AC008040, AC007688, AC005587, AC005247, AC005035, AL133445, Z49918, AC03991, AC005599, AC007676, AL049767, AL031737, AP000355, AC007376, AC005235, AC007899, AC002449, AC006947, AC006432, U95742, AL033381, AC007216, AP000501, AC007226, AL035413, AL022067, AP000080, AC005094, AC007685, AC004910, AL022727, AC005228, AC005519, AL008627, AF069291, AL117354, AC007695, AL109984, AC006529, AL110502, AC006238, Z85986, AC007270, AC004582, AL021877, AL117356, AC005081, AC006271, AP000038, Z82217, AC000052, AC005015, AC005156, AC004019, AC004605, AF111169, AC007253, AC004638, Z92844, AC002536, AL008732, AL023803, AC005523, AL050309, AL078587, AC004967, AC004059, AL031230, AL031120, AL008631, AL049779, AC00134, AL079342, AC002542, AC005022, AC006441, AL022320, AC004999, AF111168, AC002511, AL109963, AC003101, AL049757, and AC007182. |
| HDPIA21 | 8978 | 827350 | 1 - 459 | 15 - 473 | AC002400, AF134726, AP000503, AP000049, AP000311, AC009784, AC005856, AC004905, and AC007546. |
| HDPHF37 | 8979 | 706622 | 1 - 313 | 15 - 327 | |
| HDPHA89 | 8980 | 786078 | 1 - 495 | 15 - 509 | AA056286, AA054104, R88858, H83463, H86714, H84085, AA011139, AW160888, AI570404, F05284, R69197, and AA015680. |
| HDPHA40 | 8981 | 711126 | 1 - 376 | 15 - 390 | AA010368. |
| HDPHA37 | 8982 | 812336 | 1 - 494 | 15 - 508 | AB002378. |
| HDPHA34 | 8983 | 704036 | 1 - 500 | 15 - 514 | H63370, and AC005495. |
| HDPGX15 | 8984 | 660089 | 1 - 448 | 15 - 462 | AC008282. |
| HDPGX10 | 8985 | 964519 | 1 - 714 | 15 - 728 | AA281456. |
| HDPGX03 | 8986 | 924010 | 1 - 396 | 15 - 410 | |
| HDPGT96 | 8987 | 973363 | 1 - 453 | 15 - 467 | AL021938. |
| HDPGS93 | 8988 | 792256 | 1 - 454 | 15 - 468 | AF107885. |
| HDPGS45 | 8989 | 921381 | 1 - 355 | 15 - 369 | T85104, T80174, N73918, W02957, AA910341, and AC005562. |
| HDPGS43 | 8990 | 715232 | 1 - 453 | 15 - 467 | AI038997, AI458126, AI457736, N57242, AI087313, AA648507, N41553, AI655523, AI827737, and AC000119. |

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| HDPGS16 | 8991 | 909833 | 1 - 447 | 15 - 461 | AA774560, AA530983, N42742, AA825514, AJ245709, AF124141, AF135794, AL117525, AF124142, and D49836. |
| HDPGS01 | 8992 | 916352 | 1 - 454 | 15 - 468 | |
| HDPGR44 | 8993 | 468389 | 1 - 213 | 15 - 227 | |
| HDPGN15 | 8994 | 394693 | 1 - 452 | 15 - 466 | AA502207, AI050076, AA877992, R82650, AI368732, AL120141, W63553, AA211734, AW023111, AA938390, AA630122, AA493789, AA482844, AI160786, AA569059, AA737235, W01323, AA482776, AL024508, AC000353, AC005790, AJ003147, AC004815, AL034549, AL137705, AC007096, AC000159, AJ012008, AP000504, AF129756, AC006208, AF196969, AC004874, AL022314, AL030996, AL035413, AF001548, AC007541, AL109753, AC004227, AC005531, AC005529, M55987, AC002559, AL035405, Z81010, AP000362, X55448, AC007748, AL032822, AC002375, AC000029, AC007227, I41140, AC006538, AC010186, Z98885, AC002094, AC006236, AL133312, AC005535, AC018767, AC007637, Z93017, AC003071, AL096701, AC007546, AF073485, AP000256, Z68324, AP000098, AL031775, AL021393, U80017, AL132987, AL035089, AC010183, Z97353, AC006430, AF088219, AC005088, AC005156, AC006211, AC005484, AC005189, AL034417, and AC006344. |
| HDPGN13 | 8995 | 416046 | 1 - 442 | 15 - 456 | AA586451, AA515742, AI298079, F34468, AA657910, AA640252, AA831997, AI499954, AI800345, AA338635, H16875, F26713, AA161305, AA506952, AW029269, T08205, AA229159, AW242279, AI627868, AW071109, AL134167, AL041019, AI041018, AA550989, H73306, AW392414, AL045476, AW408596, AA948670, AW341955, T41134, AA658890, F37201, AI471455, AW439703, AI687343, AA111870, F34605, AI680547, AW162227, AA728925, AW377926, AL135363, AA657392, AI1054326, AA056206, AA836097, AA678950, AA325466, AW407632, U51704, AA584655, AA315052, A1801824, A1147511, AA311432, AA429481, AA554257, AL035685, AC007204, AC005206, AC004686, AC005667, AC007685, AC005366, AL109842, AC004961, AC006578, AB020859, AC005866, AB001523, AC007021, AC002314, AL034423, AC006084, Z49236, AJ251973, AF001549, AC002115, AB026899, AC005899, AC003691, AC008122, AC000402, AC002322, U62631, AC004491, AC004234, AL109984, AC005183, Z98752, AC006262, AL021393, AC006120, AL096818, AF030453, AL008707, AC004820, AC005091, AP000500, AC004963, AP000501, AL031585, AL139054, AC002470, U53930, AC002544, U535583, AL050321, AC004743, Z93023, AL009181, AF005356, AC004560, Z98256, AC004692, AC002543, AC007934, AL031686, AC005189, AC006540, AL078602, AC006071, AL096701, AC007199, Z93930, AP000512, Z69921, S79836, U11297, U08438, AP000065, AC007040, AC006001, U97187, AL049653, AC004638, AL031904, AF111170, AC007358, AC007066, AC004851, AC011504, AC005666, AC008015, AC005519, AL137716, AB014079, AC007381, AC006139, AP000514, AL049814, AC007537, AC006270, AL031284, AC003037, AL022163, AC006312, AC005695, AC005796, AC005089, AC007193, Z68323, AC004876, AF196971, AC004466, AL035652, AJ246003, AC003982, L31848, AC004752, AL096767, AC004741, AC006367, AC011456, AC007057, AL031315, AC005102, AL022722, |

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| | | | AC006101, AL096774, AL035458, AC007308, AB000462, AI022326, Z68279, AB015355, AP001063, AC010186, AP000353, Z83838, AC006006, AC004593, AC006549, AL035683, AC006077, AL020317, AL021306, AF016898, AL022238, AC000081, AC004645, AB020865, AC004991, AC005884, AL022098, AC007425, AC007189, AC007538, AC004216, AC007182, AC006111, AL023283, Z99128, AC005837, AC003043, AL031984, AL049569, AL121756, AC006947, AL133163, AL022476, AF111168, AC005049, AL1118497, AC000097, AL021938, AC005562, U91323, AL110200, AC006547, AC004644, AC004598, AC003963, AP000047, AL031662, AP000313, AP000194, AC005221, AL022327, AL080316, AC004414, AC005180, Z99943, AC004126, AC005242, AL022328, AF187967, AL031728, J00089, AL049553, AL035089, AL031428, AL132826, AC005520, AL022334, Z95118, AC002094, AC005746, AL031431, AL031255, and AF118808. | |
| HDPGN11 | 8996 | 966923 | 1 - 388 | 15 - 402 |
| | | | AA767082, AI554821, AI064787, AI815232, AA814782, AI312428, AI580927, AI036802, AA504514, AW071380, AI499512, AI801544, AW131282, AI520862, AW089689, AI538878, AI909661, AI634737, AA715307, AA613907, AL036656, AL045421, AW080565, AI499191, AI923989, AI440263, AI038779, AI582932, AA641818, AA761557, AI446248, AI923509, AI886415, AI889189, AI281773, AW151136, AW243741, AI475394, AI635492, AI866465, AI597918, AI539771, AL121270, AI364788, AI537677, AI064830, AI500659, AA809974, AI801325, AI500523, AI284517, AI500706, AI491776, AI445237, AW151138, AI521560, AI500662, AI284509, AI889168, AI866573, AI633493, AI434256, AI624543, AI88661, AI284513, AI888118, AI371251, AI436429, AI859991, AI872423, AI440252, AI909672, AW087445, AL036901, AL045774, AL121328, AI679899, AI371228, T79374, AI047422, AI269862, AI433037, AI039730, AI355849, AW117882, AI640873, AI343030, AI340519, AIW128983, AI494201, AL110402, AI866469, AI345608, AW081133, AW172723, AI860003, AI805769, AI906328, AI432656, AW162194, AI889147, AI345587, AI866786, AI610557, AI633125, AW059828, AI887499, AI045500, AW083804, AI282655, AI340511, AI119791, AC007392, AL022315, Z49258, Z82206, AL033521, AC005291, AL022723, AC006112, Z99495, AC009233, AC004383, AL021391, AL035407, AC018767, AP000355, AC005156, AC007298, AP000020, AL031984, AC005048, AC004837, AC005520, AL022147, AL122021, AC002416, AI034417, and AC005224. | |
| HDPGM49 | 8997 | 722903 | 1 - 296 | 15 - 310 |
| HDPGI75 | 8998 | 766618 | 1 - 464 | 15 - 478 |
| HDPGI74 | 8999 | 765524 | 1 - 453 | 15 - 467 |
| | | | | |

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|---------|------|--------|---------|----------|---|
| HDPGH73 | 9000 | 764397 | 1 - 104 | 15 - 118 | |
| HDPGG01 | 9001 | 916389 | 1 - 304 | 15 - 318 | AA1111917. |
| HDPGD28 | 9002 | 879489 | 1 - 433 | 15 - 447 | AI032747, AI769719, T79745, and AC004751. |
| HDPFZ70 | 9003 | 709684 | 1 - 761 | 15 - 775 | AA525394, AA484596, AA484372, AI042373, AI475660, AA464969, AW024544, AL045360, AA603359, AA808153, AI500553, AL138455, AI134524, AA974503, AL043095, AW117882, AL040319, AA177033, W95924, AI440426, AL046110, AA947997, AI696846, AI433157, AL042891, AA760655, AI863014, AC005081, AC007055, AC004491, AF196779, AC005015, AC006530, AC006285, AC006064, AL121653, AC005971, AC006480, AL109627, AF205588, AC006071, AL022316, AC006211, U47924, AP00692, AC005696, AL096791, AC004686, AL008719, Z83844, AC005225, U91326, AC005291, AC006057, AC007227, AC005231, AC002464, AF111168, AL035659, AC016025, AC002395, AC007216, AC020663, AC006014, AL022238, Z82206, AC005519, AC009516, AL121603, AP000557, AL022723, AL096701, AC005207, AC007664, AC004797, AC005399, AC007686, AC002544, AP000501, AL049569, AL009181, AC016831, AC009247, AC006312, AL022721, AC005800, AC005488, AL031311, AL049757, AL035587, AC005082, AC004841, AC004883, AL080243, AC005736, AC016830, AC002073, AC008372, AF001548, AL049694, AC005529, AL050318, AC006241, AD000092, AC004966, Z93930, AL049776, AL050348, AC004213, AC005618, AL031680, AC007051, Z85986, AC006039, Z77249, AF091512, Z99716, AL136295, AC005089, AC003982, AC002477, Z98051, AC002430, AL035086, AP001053, AC006441, AL096776, AL022336, AF109907, AC004257, AP000088, AF001549, AC002558, AC004878, AC004605, AC004882, AC002347, Z97056, AC007384, AC005962, AC004263, AC002039, AF093117, AC005071, AC004150, AC007277, AC005102, U95090, AC004813, U95739, AL135744, AC005072, AC004987, AF042090, AL132712, AP000513, AC002425, AC005755, AL034548, AL021707, AL078463, AC004832, AB004907, AL049872, AL022165, AC005874, AF134471, AC005726, AL034555, AC004383, AC006277, AC007676, Z84466, AC005180, AL049795, AL022476, AC002350, AL008582, AC004814, AL031229, AL049759, Z98200, AL034420, AC006040, AC003070, AC005409, AC005881, AC007458, AF047825, AC006953, AC005778, AF129756, AC004921, AC006449, AC006077, AF02316, AC003356, AC006077, AF019413, U95742, AC008040, and AL133445. |
| HDPFW02 | 9004 | 919306 | 1 - 558 | 15 - 572 | |
| HDPFS71 | 9005 | 486744 | 1 - 467 | 15 - 481 | |
| HDPFS59 | 9006 | 486737 | 1 - 462 | 15 - 476 | |
| HDPFP96 | 9007 | 796360 | 1 - 451 | 15 - 465 | T39977, and AL050337. |
| HDPFP71 | 9008 | 760327 | 1 - 797 | 15 - 811 | W72416, AA955016, and W76266. |
| HDPFP14 | 9009 | 486765 | 1 - 478 | 15 - 492 | |
| HDPFN23 | 9010 | 486738 | 1 - 442 | 15 - 456 | |
| HDPFM28 | 9011 | 486766 | 1 - 469 | 15 - 483 | |

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| HDPFL52 | 9012 | 486739 | 1 - 469 | 15 - 483 | AC007281. |
| HDPFI58 | 9013 | 783957 | 1 - 352 | 15 - 366 | W05340. |
| HDPFD10 | 9014 | 964521 | 1 - 705 | 15 - 719 | AA424163, and AI350948. |
| HDPFB03 | 9015 | 936331 | 1 - 678 | 15 - 692 | AI694127, AI299320, H70360, T98966, AA356015, AL045292, AA236204, AA131671, AW118104, W20295, H75919, N31893, R98291, AL117517, and AB023221. |
| HDPDH08 | 9016 | 959303 | 1 - 344 | 15 - 358 | AA082104, and AA134717. |
| HDPDD12 | 9017 | 970592 | 1 - 964 | 15 - 978 | AI939431, AW020534, AI347310, AI371784, AI423466, AW150254, AW015338, AI361447, AI419452, AI088725, AI371086, AI418456, AI361506, AI419176, AI363726, AW176344, AL120300, AI424173, AW016674, AI288889, AF097450, AF146793, AF002332, and AF000998. |
| HDPDC90 | 9018 | 590161 | 1 - 641 | 15 - 655 | TS2186, and Z97630. |
| HDP CY47 | 9019 | 775412 | 1 - 402 | 15 - 416 | W38488, N27984, AA649285, AA661773, AA298770, AA306867, H81350, AA100476, AA310276, AA417302, AA314322, AI815642, AA045597, D82429, R89903, AA130829, R83064, AA382073, AA297193, AA100050, AA344066, AA311797, T85780, AA334159, AA314221, N51146, AL122042, and AC007842. |
| HDPCP89 | 9020 | 786075 | 1 - 384 | 15 - 398 | AA494163, TS2475, and AC004148. |
| HDPCP64 | 9021 | 746527 | 1 - 320 | 15 - 334 | AL022329, and AL022332. |
| HDPCP48 | 9022 | 721620 | 1 - 406 | 15 - 420 | |
| HDPCP46 | 9023 | 719014 | 1 - 447 | 15 - 461 | |
| HDPCP43 | 9024 | 715227 | 1 - 432 | 15 - 446 | AI751151, AA418897, AA195596, AA491307, T54037, AA339713, AI751325, W79862, N41703, AA099015, H71376, AA307241, AA371799, AA485793, AA300777, AA299440, AA485195, N28794, AA313589, R85229, AA491479, H52010, AA471326, AA227051, H13340, AA218541, AA216580, R72732, AA330733, AA227045, N36603, AA219518, W52126, AI336290, AA213719, H30288, R94642, AF112482, J04794, AF036680, and AF112484. |
| HDPCP16 | 9025 | 416032 | 1 - 408 | 15 - 422 | |
| HDPCO12 | 9026 | 852847 | 1 - 446 | 15 - 460 | N23913, AI674840, AL079734, AI206841, AA502991, AA452887, AL119691, AA581247, AW023111, AL038842, AA644090, AI189682, AA832444, AI799569, AI889426, AA525764, AA765925, AI192440, AA503298, AI306149, AI627917, R34070, AA427470, H68343, AI962030, AA582554, AI066711, AA610642, AA837035, AA063008, AA468196, AI610468, AI421257, AA525331, AI610737, AA584862, AI791659, AW327624, AI267884, AA121777, AA832175, AA491767, AW245860, AI565126, AA405726, AC005632, AL031589, AL078472, AC006505, AP000967, AF196779, AF200465, AC000353, AC006932, AP000704, AC006312, AL049829, AC004859, AC007707, AC002091, AP00362, AB023048, AC004526, AC007666, AC002300, AC007283, AC003101, AC004491, AC005049, AC007774, AI031729, Z83822, AI139054, Z85996, AC005058, AI117355, AC002996, AL049569, AC002352, AC007011, AF030453, Z84480, AI133163, AP000510, AC002544, AC005412, Z83308, AC008033, AC005220, |

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| | | | I26927, I25041, I44516, A81671, AR066494, AR054110, AR060234, I09121, AR035224, I85513, AR009152, AR009151, AR027099, AR06079, AR019098, I89986, AR020199, AR020200, AR001287, AR020198, AR020197, AR028791, AR028793, I05430, I05393, A10617, AR028792, A01324, A01323, AR019094, AR034783, I63120, A92666, AR067733, A92668, I49890, AR029418, A92667, AR067734, AR067731, AR064322, AR064323, AR064320, AR064321, A32110, AR067732, AR029417, A83642, A94048, A94061, A83643, A94046, A94054, A49045, A70359, A92665, AR038307, and AR038321. | |
| HDPAO64 | 9045 | 746550 | 1 - 445 | 15 - 459 |
| HDPAN94 | 9046 | 901123 | 1 - 450 | 15 - 464 |
| HDPAK09 | 9047 | 494170 | 1 - 437 | 15 - 451 |
| | | | | AA917335, Z20320, AL080176, AF144235, and A74743. |
| | | | | AAW168420, AI254913, F12561, AI382825, AA846952, F08248, AA572999, AI751216, AA302973, AA613627, AA578621, AI818737, H07953, AI536552, N22037, AA760808, T74524, H67863, AC005755, A1049694, AC004662, AF134726, AC004605, AL021393, AC002994, Z98051, AC005261, AL034417, AC004019, AC005484, AL049779, U91321, AC002074, AC007216, AC007637, AC007242, AL031282, AC006001, AC005411, AC005900, AF053356, AC004805, AC004526, AC006344, AF111168, AL022329, Z82206, AC005899, AP000555, AC004881, AC002302, AC005668, AC005086, AC004985, AC011331, AL049830, U95742, AC004996, AL031255, AL035071, AC004975, AL049697, AL049758, AC002312, AF117829, U85195, AC005534, AL035423, AL035683, AL122023, AC007676, AP000502, AC005726, AE000658, AL080243, AC005071, AF001549, AC007226, AF001548, AC006120, AC004067, AF196779, AC002350, AC002429, AC006379, AL109628, AC007225, AL035681, AJ010770, AC005529, AF088219, Z85987, AC006040, AC003010, Z83840, AF030453, AC005391, AL109754, AC005088, AC007376, AJ011930, AC002476, AC004099, AC005049, AL049766, AC005602, AC005756, AC003080, AC006946, AC006026, AC010205, AC005829, AC007690, AC004757, AC006043, AL109952, AC000052, AC002316, AC004695, AF031078, AC005027, AL139054, AC007731, AC006965, AC005500, AF030876, AC005015, Z99716, AC007878, AL035403, U07562, AC006480, AC004890, AL023575, AC004000, AL031659, AC005324, AC006538, AC007308, AC005046, AL1117258, U91318, AC005320, AL078477, AC016025, AC005512, U893337, AC007666, AC004797, Z97056, AC006966, AL022722, AC006039, AP000045, AL033398, Z94056, Z85996, AC006023, AB001523, AC004821, AC005962, and Z82198. |
| HDPAJ64 | 9048 | 881654 | 1 - 428 | 15 - 442 |
| HDPAH17 | 9049 | 663779 | 1 - 573 | 15 - 587 |
| HDPAF40 | 9050 | 856391 | 1 - 555 | 15 - 569 |
| HDPAC90 | 9051 | 787296 | 1 - 806 | 15 - 820 |
| HDPAC78 | 9052 | 773570 | 1 - 226 | 15 - 240. |
| HDPAB34 | 9053 | 581900 | 1 - 442 | 15 - 456 |
| | | | | T94880. |

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|----------|------|--------|---------|----------|--|
| HDPPAA80 | 9054 | 775417 | 1 - 501 | 15 - 515 | T84574, and AI192443. |
| HDPPAA38 | 9055 | 546575 | 1 - 690 | 15 - 704 | AI037050, AW081941, AW406447, AA342901, AW088058, AA916039, AW074398, T71998, AI299050, AI281903, AI689097, AA610491, AI054246, AI053816, N71724, F19258, AA095511, AF177861, AA336362, AA377385, AW272758, AA501722, AA340003, AA308806, AA318652, AI357551, AI565245, AI886176, AW236342, N22059, AI364809, AA491814, AI859251, AA515435, AW301818, AI919265, AL138265, AI287451, AA177061, F29989, AW440976, AI053429, AI053672, AI274692, AI696962, AL040547, AI307426, AI284640, AA932099, AI334443, T06556, AW340844, AW361583, AI358229, F36273, AA743956, AA533465, AI963095, AW406755, AI200051, AI291124, AI365988, AI654588, AI291268, AW071063, AI537030, AW339687, AI635272, AI133164, AA321311, AI216799, AI016000, AI041368, AI138455, AA252763, AA652057, AA649642, AI264743, A1610159, AI469172, F24284, AI690686, AI623132, AA745410, AL048616, AA654627, A1601892, AI537955, AA454925, R13151, AI446601, AI801591, AA501784, F32705, AP000356, AC006004, AL121603, AC006064, AC005215, AC004814, AC005940, AL034420, AC004491, Z73359, AP000245, AI049636, AC006480, AF053356, AP000556, AC004894, AC002350, AP000552, AC005324, AL020993, AL022324, AC002072, AC004895, AF045555, AF111168, AL121653, AC005619, AC002316, AC003043, AC006285, AC004477, AC005800, U07562, AC005412, AC005081, AL121655, AL121658, AC006001, AC005046, AC005099, AC005722, AL096701, Z84484, AF111169, Z97054, AC007225, AC005920, AC007216, AC007899, AC005015, AF196779, AC007878, AL035683, AC004966, AL033521, AL035460, U95742, AC004962, AC007242, AC006388, AC000025, AC000083, AP000210, AP000132, AC004534, AC006111, AC004156, Z82214, AL096791, AC007276, AC007371, AC007686, AC016025, AC005529, AC006312, AC008041, AC004812, AL021453, AL033392, Z86061, AL132718, AF129756, AL31584, AC006153, AL049779, AL021918, AC007707, AC005157, AC005037, AP000030, AP000558, AL023284, AC005790, AL109967, AC007666, Z98742, U91323, AC007011, AP000248, AF001549, AC004815, AC008134, AC005284, AC004890, AC006251, AC005066, AP000557, AC004964, AC005280, AC005696, AL024507, AC003982, AC006071, AC004841, AP000474, AL049569, AC006211, AC008101, AC009330, AC007277, AC000078, AF196969, AL079340, AC002070, AC000052, AL049830, AC004745, AC007450, AL024498, AC005180, AL133243, AL031228, AC005666, AC003119, AC004150, AL035587, AL035090, AL035249, AC003104, AC006195, U91326, AC005250, AL031005, Z98743, AC007537, Z98048, AJ251973, AC002432, AC004776, AC007262, AC005694, AC004148, AC009516, AC004983, AC000159, AC005562, Z84466, AC006057, Z82901, AI031848, AC005288, AC005625, AC005510, AC002369, AL109802, U89337, X64467, AC007387, AI034451, AJ010770, AC007688, AB026898, AL021391, AP000311, AC002312, AC004472, AC005755, AC004750, AL031777, U47924, AL022323, Z93017, AC002525, Z82182, Z85987, AC004770, AP000692, AL035450, AF042090, AC004813, AL031230, AL031230, AL132777, AC002115, AC004650, Z83844, AL008582, AC005911, |

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| | | | AC007324, AJ003147, AF017104, Z98946, AC007919, AC005821, AJ246003, AL117351, AC005041, AC003041, AC007358, AL133355, AL035411, AC005919, AC008115, AL031255, AC005913, AF134726, AC006012, AC008079, AC005358, AC004694, AC009044, AC003102, AL109628, AL031053, U85195, AF109907, AL049766, AC003986, Z82250, AC007051, AL049780, AJ006996, AC004907, AC002096, AC006088, AC006077, AL050341, AC005399, AC005331, AC005997, AL022165, AL078463, AC006323, AP000045, AC005242, Z99716, AC005295, AP000555, and AC004996. |
| HDLBE11 | 9056 | 966230 | 15 - 365 |
| | | | AA419383, AA411025, T03583, AA233509, AA969363, AA186898, AA485941, F12561, T65562, T59612, AW020599, AA989107, AA831152, F13808, AA745507, AW020088, AW022655, R61498, T78512, AA554153, AA720755, C15363, AF165926, AC005324, AL035086, AF111168, AC003098, Z99716, U85195, AE006558, AC005488, AL049758, AC004491, AL136295, AL030997, AC005736, AC006059, Z99289, AL133245, AC003041, AC007151, AC007216, AF109907, AC003035, U95742, AC006014, AC006014, AC005914, AC005776, AC006965, AC007057, Z98742, AL031121, AL008715, AL110292, AL132641, AF088219, AF107258, D83253, AP000240, AC007226, AC007193, U91326, AC007022, AL122020, AL035089, AL024507, AC005368, AC007421, AC004765, AC002430, AC002367, AC007384, AL121603, AC006538, AP000010, AC005971, Z99572, U07562, AL035460, AL031311, AC005412, AL049829, AC005666, Z97054, AL031120, AL049872, Z97183, AC005702, AL078638, AC005520, AP000495, AL049856, AC004816, AL022476, AC006480, AF053356, AC005730, AC004675, Z98200, AP000152, AC006241, AF205588, AL049795, AC005089, AL050318, AP001038, AL031666, AL035423, AC005355, AC003070, AC002400, AC005184, AL031584, AC005726, AC006211, AC006312, AP000555, AC007077, AL022163, AC005037, AL049646, AC004821, AC009516, AC007277, Z73359, AC005884, U47924, AC004890, AP000201, AC005620, AF186189, AC002470, U07563, AC007225, AL008582, Z83822, AC005081, AL022237, AC004382, AC004800, AC005826, AC006379, Z92540, AC006537, AJ011930, AL050332, AL031431, AL050308, AC005231, AC005874, AF134471, AP000097, U91322, AP000704, AC004796, AC007376, AB023048, AC002301, AC006441, AC006064, AC006006, AC008085, AL022165, AC007917, AL135744, AL132987, AC002331, AP000155, AL022326, AL132712, D87009, AC000052, AC004230, and AB003151. |
| HDLAX74 | 9057 | 765091 | 1 - 543 |
| HDLAX52 | 9058 | 726241 | 1 - 819 |
| HDLAW58 | 9059 | 735559 | 1 - 869 |
| HDLAV11 | 9060 | 852919 | 1 - 296 |
| HDLAG57 | 9061 | 565105 | 1 - 429 |

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|---------|------|--------|---------|--|
| | | | | AL035414, AC011311, AL008627, AC005237, AC004526, AC005304, Z98751, AC002425, AC006511, AC008928, AL132777, AJ251973, AC005962, AL024493, AP000547, AC005908, AP000355, AC007052, AC009247, AC006277, AC008101, AC002115, AC005057, and AC005089. |
| HDLAC67 | 9062 | 751699 | 1 - 423 | 15 - 437 |
| HDLAC51 | 9063 | 799888 | 1 - 476 | 15 - 490 |
| HDLAC30 | 9064 | 799891 | 1 - 267 | 15 - 281 |
| HDLAA58 | 9065 | 736081 | 1 - 479 | 15 - 493 AA447870, AA447714, AA574205, AA502267, AC012384, AC004941, and AC006463. |
| HDCBF12 | 9066 | 969401 | 1 - 446 | 15 - 460 AI874270. |
| HDCBD07 | 9067 | 951948 | 1 - 416 | 15 - 430 AI559233, and AC005955. |
| HDCAN06 | 9068 | 933818 | 1 - 332 | 15 - 346 AA128887, AA128895, AP000542, and AJ239321. |
| HDCA61 | 9069 | 852968 | 1 - 495 | 15 - 509 AA658364, AI096634, and AI767001. |
| HDBAK09 | 9070 | 625387 | 1 - 705 | 15 - 719 N57222, and AL033377. |
| HDBAA11 | 9071 | 966723 | 1 - 447 | 15 - 461 AA680050, AI821757, and AW270550. |
| HCWWH01 | 9072 | 915420 | 1 - 496 | 15 - 510 AI690025, AA719414, AA502477, H71101, Z36759, AA558459, AC003584, AC005529, AC005527, AP001052, AC006211, AC000025, AC005581, AL022717, AL021155, AL022578, AC006270, AC004910, AC006026, AC004682, AC004884, AC008040, AF196779, AC003010, AC008116, AC006077, AL022319, AL117338, AC007225, AC004382, AL034429, AL008722, AL022336, AF196969, AC005412, AC008072, AL009172, AC005088, AC005697, AC009516, AC006449, Z94056, AC004638, AC009294, AC005089, AC004685, AC004963, AL080243, AC005776, and AF030453. |
| HCWVA80 | 9073 | 974488 | 1 - 457 | 15 - 471 AC007349. |
| HCWUS57 | 9074 | 974462 | 1 - 565 | 15 - 579 N88601, N84855, AA247827, N84048, N83992, AA096046, AA095359, N89520, N83991, N83168, AA247964, N88782, H58760, AA093224, N55698, AA095641, AA096066, AA471338, N84718, N86694, N83993, N84712, N88518, N84830, N87989, N84829, AF102850, U48696, AF039698, AR066487, AF103726, S78798, AF045432, AF032922, AI243486, and U39066. |
| HCWUS50 | 9075 | 974467 | 1 - 568 | 15 - 582 N88782, N84855, N88601, H58760, AA095359, N83991, N83992, AA096066, AA096046, N83168, AA247827, N89520, N84048, AA247964, AA095641, N84830, N84712, AA471338, N84718, N86694, N55698, N83993, N84829, N88518, N87898, AA089553, U39066, AF102850, AR066487, AF103726, S78798, U48696, AF045432, AF039698, AF032922, and AI243486. |
| HCWUQ81 | 9076 | 853002 | 1 - 505 | 15 - 519 H83216. |
| HCWUQ10 | 9077 | 964080 | 1 - 471 | 15 - 485 AI082150, and AA865640. |
| HCWUP62 | 9078 | 743064 | 1 - 597 | 15 - 611 H44723, AI820826, H26859, and AI820767. |
| HCWUM01 | 9079 | 974466 | 1 - 634 | 15 - 648 H58760, AA096046, N88601, N84855, N83168, N88782, AA247964, AA095359, N83991, N89520, N83992, AA247827, AA096066, N84048, AA095641, N84830, N84718, N86694, N55698, N88518, N83993, N84712, N87989, AA471338, AA089553, N84829, N87898, |

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| | | | | AC005226, AF103726, U48696, AF039698, AF102850, ST7898, AR066487, AF045432, AF032922, AJ243486, and U39066. |
| HCWUL35 | 9080 | 706530 | 1 - 679 | 15 - 693 |
| HCWUJ49 | 9081 | 722674 | 1 - 396 | 15 - 410 |
| HCWTP17 | 9082 | 662486 | 1 - 430 | 15 - 444 |
| HCWTL02 | 9083 | 919252 | 1 - 608 | 15 - 622 |
| HCWSC38 | 9084 | 706523 | 1 - 533 | 15 - 547 |
| HCWLA43 | 9085 | 927571 | 1 - 427 | 15 - 441 |
| HCWKAT71 | 9086 | 888167 | 1 - 333 | 15 - 347 |
| HCWKS70 | 9087 | 757172 | 1 - 340 | 15 - 354 |
| | | | | AA526413, AI521525, AI249565, AW238712, AL040430, AI188049, AA286836, AW020150, AI278372, AW327852, T30864, AI557422, AA572974, AA745302, AA947265, R49266, AA729253, H91704, AA683069, AA525807, AW022897, AA370037, F01222, AW243945, AL041681, AL041682, AI567391, AL035681, AP000344, AL031120, AL096791, AL022165, AC007363, AL034429, AP000359, AP000301, AC005998, AC009247, AF047825, AF039906, AF045555, AC005484, AI132712, AC005702, AP000116, AL122020, AC007934, AC004815, Z82190, Z98036, AC004144, AC004834, AC004148, AL049576, U91319, Z988884, AC007225, U63721, AC005520, AC006270, AC002558, Z93930, Z85986, AC009509, AP000555, AL023805, AC005037, AP000252, Z84480, AP001053, AF064861, AC005288, AL020997, AF112482, AP000080, AC006965, AC004476, AC004890, AF111168, AL008718, AC007842, AC004560, U47924, AL133243, AC006468, AC007227, AL049830, AC002563, AL031577, AC005913, AC002314, AL034549, X89398, AC005015, AC005231, AC007308, AP000505, AC019014, AL022326, L78823, AC002310, AB020865, AP000691, AC005412, AL049692, AC005971, AC006132, AC004878, AP000547, AC002288, AC005225, AC012330, AC005089, AC005510, D42052, AC003982, AC005736, AC006960, AC004983, Z82198, AC006241, AL049760, AC007676, Y14768, AF205588, AC005488, AL031295, AC000094, U91323, AF031078, M27147, Z93017, AC005387, AL008729, AC00003, Z98304, AC004000, AC004019, AC005102, AL049569, AC005057, AL035458, AC004623, AC005932, AC008372, AC016025, AC002511, AC005399, AF030876, AF129756, AC007193, AC004814, AC005874, AF134471, Z97056, AF176815, AP000354, AC005632, AC004998, AC003104, AC002389, AP000212, AP000134, AC005839, AC005730, AC004916, AC005212, AC004685, AC004024, AL096703, AC007536, AC005899, AC005067, Z83844, AL049776, AP000501, AL096766, AC007666, AL135744, AC005755, AF195658, AC004466, AL132987, AC008132, AL031229, AL034402, AL121603, Z69921, AC006261, L47234, AC004821, AC003026, U07561, AC002316, AL035450, AC006050, AL049758, U95739, AC005328, AC008012, AL117356, AC004526, AP000131, AP000209, AC002400, AP000141, AC004382, AJ009610, AC004876, AP000045, Z98886, AC006064, AC007055, U85195, AC005722, AC002477, AC007384, AF030453, AL133245, AC006948, AC005207, Z97054, AL009181, Z85987, AC003983, AF001552, AC005527, |

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| | | | | AC005778, AL109628, AP000557, AC004663, AC003041, AC006367, AF196779, AL022320, AL080243, AL049795, AC003663, AC006080, AL031602, AC008115, AF195959, AC002115, AP001060, AC003043, AC005005, AC005512, AC005378, AC002375, AC004938, AC004973, AC004780, AC000353, AC004672, AC003662, AC004033, AL136295, AP000338, AC005529, AC005088, AC004882, AC004111, and AC003962. |
| HCWKS35 | 9088 | 706518 | 1 - 319 | 15 - 333 |
| HCWKR86 | 9089 | 784705 | 1 - 369 | 15 - 383 |
| HCWKR85 | 9090 | 783555 | 1 - 271 | 15 - 285 |
| | | | | AI811879, AW270258, AA659360, AI254779, AA602906, AW438542, AW075729, AI708005, F00564, AA700943, AA622801, AW117740, AA833896, AA833875, AA769429, AL048275, H53217, AA765170, N72170, AW020992, AI249886, AW438539, F02999, H66577, AI654247, R95840, AI253376, R94288, AI281881, AW304805, AA470567, AA302978, H60249, AC010169, U67818, AC007055, AL109984, AL121655, AF039907, AL139054, AC006077, AC006211, AC016027, AC006441, AC016830, AF053356, AC005015, AC002477, AL049631, AL049780, AL035422, AC004067, AC002350, AC002351, AC004031, AC007199, AC004752, U78027, AC006251, Z97184, AC007565, AC006480, AC004087, AL031311, AP000299, AL133246, AC005911, AF111168, AC005377, AC006323, AL021939, AC004922, AC007551, U85195, AC005914, AP000032, AL022163, Z97056, AL022311, AC004815, AP000212, AP000134, AC004382, AC002429, AC006333, Y15727, AE00658, Z83840, AC004893, AC005837, AC005200, AC004983, AC002463, AL031291, AL050321, AL031666, AC005821, AC005180, AL080243, AC002544, Z93023, AC006312, AC007688, AF196779, AC005940, U34879, AC002107, AL049776, AP000045, AP000113, AC005264, AL049856, AC005273, AC005902, Z93241, AC005488, AC004796, AJ010770, AC004805, AL031848, Z81364, AC006014, U91326, AC003098, AC005369, AF088219, Z99943, U73637, AC007263, AL133353, AF017104, AC005089, AC004841, AF111167, AC002312, AC005295, AL031985, Z93020, AD0000833, AL049872, AF001552, AC005620, AL049713, AL022165, AC000039, AF031078, AC020663, AL021154, AL021394, Z82976, AC005520, AL023803, AF047825, U52112, AC007860, AC004821, AL023575, AC005225, AL133245, AP000555, AF015416, AC004148, AC005722, AL022476, Z83826, AC005562, AF030876, AC007308, AC004000, AL096701, AC007277, AC004216, AC004125, Z70280, AC004638, L78833, AC004686, AL022320, AC004099, AP000563, AL030996, AC005484, AC006208, AC005048, AL033521, AL031602, Z822208, AC005086, AC005183, AP000692, Z97054, AC006449, Z68870, AC002531, AC004914, U15177, AF207550, AL096801, U07563, AC005756, AL022316, AL035398, AL096791, AC004647, Z98941, U95743, AC005519, AC005399, AC004675, AP000431, AC004913, AC003104, AL023553, AC002072, AC007868, AL049766, AC002543, AP000501, and AP000346. |
| HCWKR62 | 9091 | 742602 | 1 - 314 | 15 - 328 |

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| | AA496260, AI133297, AI632991, AA768905, AI917271, AW265385, AA828712, AA904218, AA598824, AA503673, AA528519, AA346458, AL046409, AI270117, AA614070, AA623002, AW029038, AI962050, AI619997, AI038072, AA228420, AI358229, AI171513, AA490183, N27760, AI085124, AI625244, AW301350, AA493708, AW406755, AW303196, AW274349, AA834755, AI368256, AA703891, AA906889, AI334435, AI929531, AA501600, AA721981, AI307608, F36273, AW193295, AI904894, AA482881, AI696962, AA531372, AI339850, AA491284, AI580652, AA767376, AW023672, AA846952, AA745355, AA587604, AA877817, AI887483, AA657535, AI254316, AA177061, AA629992, AA469451, AA228332, AA502050, AL038785, AA652057, AI064864, AA533725, AA493456, AI686809, AA601270, N25303, R95139, AW062724, N71728, AA488573, AA878438, AA719292, AA992351, AA610783, AA613227, AA501418, AI828463, AA568341, AA837084, AA501722, AI613280, AI345157, AI679045, AA079328, AI305766, T94075, AA196796, AA164251, AI819574, AA515644, H86431, AP000294, AP001111, AP000043, AC005215, Z988835, AC006312, AF015416, AC004813, AC007051, D83989, AC007919, X53550, U18391, U18392, X5925, AF077058, U57009, U18395, U18394, U57005, I51997, X54181, X54178, U57008, AL031985, X54180, U57006, AC007773, AL008715, AL121655, AC004853, X75335, AP000090, U18399, AL133353, AL080242, AL022163, AF015160, X54175, U18398, U18393, X54176, AC000353, AF190465, AL117330, AL049829, Z84469, AC004451, AL035450, AC009516, U18387, AP000553, AL117258, Z69666, AC002094, Z93241, AC002470, X55924, Z98051, D87675, M57427, AL034451, AL035361, U67218, U18390, AC004534, AC004534, AC005594, AB009804, AC004069, AC005231, AC004593, AL049699, AC005625, AC007437, AL078477, AC007384, AL023882, X55931, AL031257, AC005755, U07562, AC002430, AC003007, AL049544, AC006241, AC002369, AC004019, AL035410, Z86061, AC007151, AC006271, AL132987, AL022322, AP000459, AC008064, AC003109, AC002476, AL121603, AC005701, AC005229, AC004883, AC006373, AC000035, AP000402, AC006288, AI031719, AL049643, AC005089, AL031286, AC005740, AC001231, AC007999, AL096774, AC004884, AC005412, AC007226, AC004643, AC006057, AL021453, AC006285, AL031053, AC003003, AL035405, AC002041, AC011422, AC005632, AC004966, U63630, AC004832, AC002347, AC006344, AJ251973, AC002310, AC004016, AC006006, AL008716, Z69917, AP000117, AC004821, AL079340, AC007686, AC002375, AC004638, U18396, AL049557, AP000349, AC004982, M37551, AC000025, AP000193, AC004099, AC004918, AC005881, AL078463, AC007191, AL132994, AC005527, AC002468, AC006011, AF128525, AF165142, AL080243, AC007462, AC007229, U91321, AC006213, AL022302, U63721, AB020865, AC005563, AC006960, AF11169, AC010170, AC004895, AC016027, AC004662, AC005784, AC005291, AF123462, AC003047, AC002429, AC000004, AL031662, AL021808, AC005914, AL050333, AC008249, AC000052, AL049759, AL008718, AC002308, AC005295, AC004933, AC006130, AL049697, AC005399, AC007043, AC004914, AF041427, AC005331, AC004987, AC005661, AC002565, AL035458, |
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| | | | | AC007274, AC004152, AL109963, AC003957, AC007387, AC006537, AL031428, AF001549, AC006251, AL133238, AC007032, AC007656, AC007487, AC005924, AC004876, AC006016, AC011504, U95742, AF010238, AC008372, AC005212, AC005682, Z83822, X55928, AP000328, AL050343, AC002425, Z98744, AC005037, AC005323, L13176, AC005829, AL049776, AC005592, AC002538, AC005488, AL049712, U78027, AL096771, AC004799, AL031255, AL031427, and AC007537. | | |
| HCWKR51 | 9092 | 725027 | 1 - 329 | 15 - 343 | 15 - 427 | AI376239, AI887314, AI224387, AI632810, C15060, AI857756, AI457313, AI634187, AW069227, N58179, AA630535, AA452887, AA598927, AW151247, AI192839, AA669054, AA811741, AA743968, AA218720, AA084609, AW082470, AA368616, AA604865, AA54886, AA340581, AA581247, AI471476, AI912401, AI066646, AI357628, AI537995, AI536858, AI130709, AI955029, AI491765, AA481887, AI491765, AA481887, AA12401, AI066646, AI357628, AI537995, AI536858, AI742168, AA481887, AA489240, AI370170, AA659608, AA086318, AW080356, T74524, AA515457, AW188742, AA493731, AW304699, AI679221, AA598605, H84412, R43992, H48767, AA666295, AI289941, AI802087, AI289942, AC005058, AC005225, AJ003147, AC002302, AL031685, AC016027, AL021878, AC016830, AC02996, AC005512, I34294, L24093, AL080243, AC005940, Z84466, AL035587, AL049776, Z97876, AC005512, I34294, L24093, AL080243, AC004531, AC004216, Z98946, AC005082, AC005844, AC004542, AL034420, AC006347, AC005231, AC004817, AC006449, AL049697, AC005071, AI024508, U63721, AP000501, AC006285, AC002352, AC005412, AC005006, U80017, AP00212, AP000134, AC005881, AC002565, AC005200, AC004598, AL035569, AC002369, AC005971, AC007671, AF047825, Z85986, Z84480, AC002303, AC005049, U95739, AI021578, AC007051, AC004590, AC006006, AL022721, AP000252, AL049830, AC005696, U91325, Z85987, AC002045, AC004878, AC005295, AC006538, AL096701, AC006014, AC012331, AC005041, AC000079, AL136295, AL031311, AC004477, Z83844, AC003109, AL031431, AC007917, AC002350, AL049839, U91321, AC005378, AC008372, U52111, AC003982, AC005839, AC006111, AL121603, AC006468, AL110502, AC004815, AC004882, AC005520, AL049869, AC005399, AL031735, AL035086, AL050307, AC006065, AC010077, AC007395, Z83845, AC007216, AL008719, AL022165, AC007666, AC008040, AC002314, AC005274, AL031602, Z94056, Z98884, AC005529, AC004832, AL022237, Z82206, AL031291, AL049874, U07561, AC005488, AB003151, AC005899, AC005914, AF207550, AL109963, AL031848, AC004895, AL049757, AL109627, AC004526, Z82178, AC005081, AL031657, AC006211, AC002558, AP000042, AP000110, AC007129, AC007325, AL133238, U95742, AL022320, AL132777, AC005037, AL031673, AC004814, AC000035, AC005682, AL050321, AL121653, AL022316, AC004655, AC006023, AC007938, AC004851, AC020663, AC006509, L47234, AC002390, AL109623, AC006241, AL049793, AL133244, AL022336, AF134726, AL031985, AL022322, Z82215, AC006121, AC004854, AC004893, AP000032, AC006040, AC006057, AL035422, AP000251, |

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| | | Z93023, AC005088, AL035683, AC006952, AC004475, AC006071, AC007055, AC002351, AC005531, AC004522, AC004999, AL022315, AL122021, AC004686, AC006077, AC005220, AC002044, AC005072, AL009172, AC005383, AC002400, AC005005, AC002365, AC007664, AF001552, AL009031, AF205588, AC005358, AF001549, AC002326, M37468, AC007263, AL034423, AL133448, AP000509, AC004019, AC007052, AC007308, Z83840, AC006125, Z97056, AC004525, AC006536, AL008582, Z95114, AL034379, AC007226, and AC007845. | | | |
| HCWQKQ09 | 9094 | 625546 | 1 - 448 | 15 - 462 | AI804923, N70274, AI992261, AW140138, AA934526, AI793312, W88993, and AI077351. |
| HCWKI72 | 9095 | 760628 | 1 - 188 | 15 - 202 | AW090499, and H43869. |
| HCWKD85 | 9096 | 783545 | 1 - 288 | 15 - 302 | W45058. |
| HCWKC61 | 9097 | 741803 | 1 - 640 | 15 - 654 | R00030, W88606, AA777327, W88525, AI033236, and R00122. |
| HCWHN53 | 9098 | 728248 | 1 - 332 | 15 - 346 | AA148646. |
| HCWHF76 | 9099 | 838528 | 1 - 683 | 15 - 697 | AI963720, AA490183, AL046409, AW406755, AI431303, AI284640, F36273, AI345654, AA581903, AW193265, AI754955, AW072923, AW274349, AL119691, AI344443, AI350211, AA525824, AI270117, AW303196, AI613280, AA610491, AW276827, AL043719, AW301350, AW419262, AI281881, AI679782, AW438643, AI561060, AW327868, AI801591, AW088846, AI246119, AW270270, AA491814, AI344844, AW029038, AI754253, AW276435, AI345681, AI345675, AI200051, AI341664, AI619997, AW238278, AI138455, AW072587, AI085719, AI696793, AW265009, AI061334, AI289067, AI471481, AA720702, AI357288, AI377919, AI375710, AI792287, AI053672, AA613345, AW162049, AI962050, AL037683, AI801600, AI929531, AL044940, AI358229, AA713815, AW410400, AI471543, AW276817, AI799642, AI860020, AA469451, AI355206, AW408717, AW193432, AW407578, AI669453, AI041690, AI688846, AI339850, AA521399, AA521323, AI754658, AL046205, AI761471, AW406162, AA806796, AI537955, AI110770, AI365988, AA669840, AI589230, AI042420, AI120687, AI133164, AW265393, AW404653, AW166815, AA229814, AW088202, AI298710, AI148277, AI124759, AA491284, AL048925, AA630362, AW304584, AI904894, AI633025, AI635818, AI708009, R88888, AA569471, AI610159, AA525190, N48230, AL138265, AI654588, AA631507, AI473943, AI312309, AI345518, AW162489, AW167372, AI038785, AW023270, AI079645, AI871722, AI336660, AA226153, AI890918, AA623002, AI133102, AI568678, AA714453, AA665330, AA577906, H71429, AW008952, W79504, AW071196, AW261871, AI046457, AI281697, AI143242, AW338086, AI928790, AI357551, AI499503, AI467919, AI434695, AW073470, AW103758, AI918421, AA126051, AA126035, AA502155, AA577959, AI564185, AI040382, AA780515, AW088616, AA513141, AI287651, AI471572, AI571512, AI251002, AW008317, AW339568, AI590958, AI749559, AI624142, AI049634, AW023672, AA493708, AI240168, AA482711, AI283911, AA587256, AI370878, AW162288, AA551552, AI041146, AW080134, AA526787, AW102955, AI564454, N27584, AA621858, AA493471, AI623720, AA877817, AI135405, AI654525, AA507547, AI287528, AI254615, AW276932, AW338500, R8967, AI046898, AA908637, AI434706, AC005488, |

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| | AA532419, AA714288, AI002941, AI630643, AL038606, AA632744, AA579188, AA581895, AI056177, AA515728, AA715805, AI524360, AA353907, AI048925, AA011026, AA714011, AA912287, AA661499, H48620, AI186438, AI249683, AA086368, AW168433, AL119921, AA491681, AI341571, T06598, AW020599, AI085867, AI732348, AA603421, AA838190, AA581263, AI580250, AI582825, AL138329, AA486117, AI612070, AI460009, AI065038, AW270343, AW271069, AA603530, H49568, AA137013, AI610065, AA574001, AA457249, AI207846, AA669155, W03358, AI733856, AA491650, AI754567, T69857, AA491862, AA610509, AA410788, AI611533, AI002744, T59612, AI054419, AA622801, AI278972, AI732349, AW023662, J00083, Z93244, AC005031, U80017, AF002223, AF088219, AC004675, AP000692, AC006953, AC005993, AC006275, AC006001, AC005391, AL080243, AC007999, M33132, AC002407, AC002543, AP001051, Z84483, AL031311, AC005399, AC000085, AL031680, AC006023, AC006353, AL008734, AC006312, AC006310, AC004491, AL079340, AC002301, AC007406, AP000270, AL121595, AC005288, AC002115, AP000962, AL133353, AF045555, AC006468, U78027, AC005011, AL021154, AL121825, AC006115, AC005778, AL020997, AL049761, AC005829, L48038, Z84484, AC007773, AC004232, AC004832, Z98752, Z95152, AC004821, AC007308, Z84474, AL035422, U95739, AC006120, Z94044, AC000026, AP000555, AC007358, AL096712, AL009183, AC005015, AC006064, Z82248, AC004408, AL022316, AC003969, AF064861, AC006344, AC006538, Z69917, AL135744, AC004030, AF207550, AP000104, AC006088, AC006211, AP000032, AC006112, AL034417, AC002059, AP000193, AL122020, AC004841, AL078477, AC006125, AC006946, AC003030, AC007292, AL035541, Z93023, AC002472, AF111168, AL049775, AP000557, AC004230, AL109758, AC007225, AC012384, AC005808, AC002470, AC003043, AL096766, AP000097, AC005159, AC020663, AL022165, AC005884, AC004815, AC007934, U95742, AC005369, AC002477, AC004825, AF085916, AC004560, AL031447, Z93930, AC005529, AL031432, AL022326, AC005088, AC004595, AC004910, AB023049, AC006965, AC007787, AL031671, AF165926, Z70280, AC005368, AP000466, AF196970, AC005102, AC005257, AP000201, AC008042, AC005881, AB023048, AP000117, AC005519, AC004453, AL031659, AL109984, AC004883, AL050341, AC004149, Z97054, AC007792, AC006111, Z83826, AL021707, AP000266, AC005932, AL022476, AC004966, AC004851, AC008041, Z85986, AC003109, AD000833, AC005037, AL031289, AC007277, U62293, AL022336, AJ251973, AC005409, AC004236, AL139054, AC004884, AF200465, AP000159, AP000017, AC002492, AC009509, AC007686, U67820, AL049776, AF196779, U07562, AC004000, AC004938, AC005800, AC004032, AC007216, AC007371, AL023494, Z98742, AL109802, AC006947, AL133448, AL035587, AL109627, U73634, U07563, AF030453, AC007676, AC008119, AP000302, AC005412, AC002549, AC004686, AL009051, AC004991, AP000345, U91322, AL031281, AL049872, AC004967, AC005796, AC005261, AC002072, AF051976, AL035423, AF190465, AC00465, AC000118, AC000118, AC002994, AL078584, AC002563, AC004019, AP000030, |
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| | | | | AC005486, AC022517, AL121653, AL033527, AL049795, AL022324, AC005632, AC005033, AC002565, AC005274, AC002554, U52112, AL034420, Z83838, and AC005525. |
| HCWVF07 | 9106 | 953582 | 1 - 417 | 15 - 431 |
| HCWVF40 | 9107 | 710419 | 1 - 516 | 15 - 530 |
| HCWFM44 | 9108 | 716726 | 1 - 591 | 15 - 605 |
| HCWFK37 | 9109 | 800389 | 1 - 292 | 15 - 306 |
| HCWFI71 | 9110 | 489879 | 1 - 425 | 15 - 439 |
| HCWFE35 | 9111 | 722467 | 1 - 383 | 15 - 397 |
| HCWFA63 | 9112 | 578898 | 1 - 349 | 15 - 363 |
| HCWFA51 | 9113 | 584725 | 1 - 361 | 15 - 375 |

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| | | | | AC003070, AL121825, Z77249, AC007541, AF006752, AL031311, AC005514, AC007666, AC002070, AP000113, AP00045, AC005049, AC007686, AF053356, AC006960, Z86090, AL096776, AL133163, AC008044, AC007151, Z85986, AC004638, AC006013, AP000359, AL049631, AL023807, AL022396, AL09181, AC006277, Z98044, AL121658, AL109758, AC006064, AL135960, AJ131016, AC004491, AC005102, AP000502, AC004797, AC006111, AL024498, D00591, AL023575, AC004859, AC005081, AF002223, AP000555, AC005529, AC016025, AC005031, AC003108, Z97181, AL121655, Z93241, AC005664, AC002365, AC005899, AL109984, AC005237, AC004876, AC005189, AC006511, AC006512, AC000120, AC005914, AC005089, AF196969, AD000092, AL034379, AL096701, AC005746, AC007227, AC000052, AL050318, AC004150, AC005383, AL049830, AF047825, AC004975, AC003029, AC005736, AC004832, AC004148, AC005488, AC005837, AP000350, AC002350, AC006275, AC006480, D87675, AC004816, AL133243, AC005722, AC005538, AC000126, AC000120, AC005901, AC005531, AC005972, AF196971, AC007878, AC004601, AP000090, AC005527, AL133445, AC007216, AC007226, AC004019, AC002492, AC005523, AC000379, AC004668, AL121653, AC008072, AL034420, AC002369, AL049776, AP000009, AL133246, AL035249, AL031767, AD000813, Z82244, U47924, AL080243, AL121652, AC005921, AC003983, AL009172, AC004167, AF111169, AL031120, AL136168, Z97053, AC002117, U95742, AC002312, AP000356, AC005372, AL022322, AL023513, AC005015, U80017, AC005932, AC005993, AC002452, AC003071, AF001549, AC002300, AF134726, AC005412, AL049795, AC006026, AP000692, AL117337, AC006132, AL049757, AC002470, AP000150, AC006241, AC004257, AF190465, AC005480, AC005726, AC006014, AF048729, AC005702, Z98036, AL008718, AC004814, AC004611, AC007199, AC007773, AL031587, AL031591, AC007050, AC004589, AC006538, AC002316, Z97353, AL031732, AC003962, AC006965, AC002094, AC005399, AC006050, AC005821, AL035458, AC005920, U85195, AL021392, AC005387, AC005409, AL109627, AC005288, AP000513, AC004477, U91321, AL021391, AF064861, AC002310, AL121748, AL034582, AC004560, AC006211, AC003959, AL035420, AC005386, AL021155, AC005193, AL022721, AC004801, AL022476, AC005778, AC005338, AC004966, AL022328, AJ003147, Z81365, AC007314, AB023048, AE000658, AL031666, AC004448, Z95116, AC006126, Z85996, AC000353, AL035086, AC004031, AC006441, and AC004447. |
| HCWFA27 | 9115 | 578899 | 1 - 337 | 15 - 351 |
| HCWFA03 | 9116 | 921938 | 1 - 367 | 15 - 381 |

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| | | AA622954, AA078616, AA643770, AI580250, AA182731, AA303054, W03818, W45205, AA054343, AA581263, F30158, AI682899, AP000557, AC007050, AC007308, AP000556, AF111168, AF141309, AC007227, AF134726, AC005529, AL022323, AC002565, Z84466, UT78027, AC006277, AC006275, AC005329, AC004584, Z68321, M63543, Z98950, AP000503, AC004686, AL117258, AB016897, AC003110, AL031848, AL132712, AC004991, AB015355, AL021918, AC006040, AL049869, AC009516, AL035249, AL034420, AC005971, M63544, AP000098, AC008119, AC005330, AP000115, AL031283, Z83826, AC004382, AC005015, AL008721, AC005800, AC006285, Z98036, AC006449, AC005231, AC004878, AC004000, AC004678, AC005940, AC006125, AC008101, AC007201, AC004596, AC005632, AC006130, AC004560, L78810, AC004525, AC005295, Z97056, U07562, Z93783, AB003151, AC005512, AC005829, AC006965, AL031587, AC008044, AL034418, AC005523, AL031846, AC004167, AP000558, AC006111, AC002316, AB023049, AC004814, Y18000, AL050312, AC004476, AC007055, AL034417, AC006512, AC007637, AC005280, AC004895, AC004876, AP000509, AC002314, AC003070, AC002126, AC0055808, AC010205, AL008582, AC007011, AC004851, AF053356, AC009275, AC002036, AC005102, AC005722, Z93930, AC005944, AC003963, AC007314, AC006126, AL031291, AP000494, AC006312, AP000053, AL109984, AL139054, U91328, AC002550, AC005089, AP000140, AL035422, AC005520, AC002477, AC006014, AC005874, AF134471, AL035587, AL031311, AC005902, AF111169, AF207550, AC008040, AL023882, AC007793, AL008730, AC005081, AC005057, AC005005, AC006050, AC006468, AL121754, AF044083, AL009181, U95739, AL031602, AC002558, AP000088, AL031295, AC007371, AC004638, AC004234, AC005778, AC0054929, AC005548, AB000877, AC007842, AC005821, AF129756, AC002400, AC004013, AL133244, Z86090, AC004673, AC002425, AC005544, AC006486, AL122003, AB001523, AL121655, Z98743, AC004598, AC005535, AL049576, AC012331, AC005695, AL096763, AL096701, AL0233807, AC005488, Z95115, AC002082, AL050404, Z988835, AC005747, AC007792, AC005907, AL021391, M63005, AL133163, AC005071, M63480, AL031282, AC004088, AC006211, AL096791, AC005291, AC003007, AR036572, AL078581, Z83845, AC006946, AC007731, AL136295, AD000684, AC005206, AP000045, AF038458, AC010206, AC006064, AC007216, Z83840, AL022163, AL022721, AC005696, Z84480, AC005514, AL008725, AP000466, AF181896, Z92542, AC002347, AC005932, AL050348, AP001056, AL117694, AF196779, AL031427, AC004139, AP000555, AC003043, AC005943, and AC000353. | | |
| HCWEW92 | 9117 | 573389 | 1 - 249 | 15 - 263 |

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| | | | <p>AI284543, F16345, AI801563, N83186, AA846923, H58293, AI927275, AA368155, AA610381, AI271762, AA714955, AA609792, F35684, AI249853, N64587, AI254770, AA452569, I34294, U82668, AC005231, Z83845, AL132712, AC006130, M87912, AC006064, AC005785, AC005519, AC006581, AC002369, AC002425, AL020995, AP000239, AC003688, AP000497, AL035413, Z84469, Z47046, AF045555, AC006111, AF111168, AL121655, AC005484, AC003982, AC004966, AL031662, AC006263, AC007421, AP000353, AC007566, Z95113, AC005005, AL033527, Z93783, AC005844, M74900, AC002477, Z84487, U29119, AC004659, AC002430, U80460, AL133245, AL035703, AL080243, AC005747, Z79996, AC005081, AL109963, AL022323, AL031848, AF053356, L34635, AL031289, AL034417, AC007371, AC005759, AL122020, AC007384, AC006254, AC005624, AL023575, AC004263, AC005755, AL133163, AC006146, AC005971, AC007225, AC008079, AF187320, AC003101, AC004771, AC004990, AC002378, U91327, AC004890, AL031575, AC002316, AL109623, AC007011, AC005900, AC004821, AC002117, AL139054, AC007666, AC005015, AD000812, AP000349, AC004991, AL020997, AF031078, AC018633, AC006538, AC004477, AC006126, AC002476, AC006312, AF111169, AL021578, AC006441, AL022097, AL022336, AF030876, AC004991, AC005049, U95739, AL096791, AC005940, AL049712, AP001053, AC004685, AJ011930, AC004854, AC000052, AC005332, AC003080, X69997, AL031295, AC006960, AL022318, AF196971, AC005548, AC002551, AC002558, AC004878, AC004891, AL031602, AC007731, AC004858, AL035249, AL022313, AL109627, AC004033, Z93017, AC005625, AC005500, AC005730, AC007676, AC006515, AC005803, AL109758, Z940444, AC004668, AC005255, AC004598, AL031255, M30688, AC005924, AL133382, AL049839, AC004019, Z82190, AC006071, AC005512, AP000095, AC006141, AL109753, AC005954, AC006455, AP000359, AC000082, U91326, AC010722, AC006468, AC006241, AL031186, AC002544, AC005261, AL096701, AC004752, AC005274, Z98946, Z98884, AC004186, AL049829, AF107045, AC009464, AC005695, AC004791, Z98051, AC002996, AC004195, AC000397, AC007201, AC005874, AF134471, AC005089, AL049759, AC004491, AC004195, AC004195, AC004195, AC004195, AC004195, AB022785, AL022721, AL121653, AC005527, AL035420, AF017104, AC005071, AL024507, AC005837, AC002347, AC005288, AC005694, AC002350, AC003043, U80017, AC004841, AL031774, AL034549, AC004895, AC004895, AC005368, AC004653, AC008134, AL035695, AP000553, AC005773, AC002094, AC005529, AL022717, AC004799, AC005214, and AC005568.</p> |
| HCWEW68 | 9118 | 849928 | 1 - 309 |
| | | | 15 - 323 |

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| | | | | AC005081, AC007421, AC004675, U70065, AL031255, AC005520, AC006538, AC004009, AC005363, AL035684, Z81364, AC002504, AC004999, AC005837, AF088219, AP000693, AC000065, Z93930, AC006449, AC005476, AL132992, AL031587, AC004097, AC005747, and AC005618. | |
| HCWES28 | 9119 | 685585 | 1 - 114 | 15 - 128 | AA025970, H57826, H99934, AA303007, T50624, AA719520, AA632744, AL042927, AI791156, AI866422, AA862218, AA017323, AA174016, AA174017, AA330576, AA486896, AL035071, AL132987, AC004663, AP000347, AP000346, Z95152, AL035701, AC005323, AC006597, AC005280, AL031311, AC004929, AL022324, AC003667, AC006023, AC003080, AF134726, Z99570, AC006501, AC005207, AC002543, AL121748, AP000695, AC006084, Z97056, AC007283, AC004991, AC007057, AC006064, AF205588, AL031255, AC004019, AC002369, AC012330, AC007263, AC005257, AL021546, AP000550, AL035467, AP000356, AC0098018, AC004811, AL078477, AC005089, AC003663, AP000503, AC004522, Z83844, AC002425, AC007878, AC004496, AC007021, AC005829, AL031685, AC005041, AC007055, AC006080, AC005399, AC007536, AL034548, AC006449, AC003041, AC005755, AC005015, and U52112. |
| HCWER13 | 9120 | 586984 | 1 - 262 | 15 - 276 | AI284640, AL046409, AI270117, AW274346, AI583283, AW193265, AA490183, AL038705, AI613280, AL037683, AA584167, AA581123, AI969436, AI744826, AI305766, AA587604, AI345654, AI281881, AI801482, AI350211, AI696962, AI732764, AA584201, AW021583, AI732865, AW407578, AA720702, AA602047, AW265385, AI860013, AW245747, AI559705, AA579366, AW073470, AI754336, AI375542, AA470969, AA634889, AI192631, AW408717, AA722372, AI798473, AI039932, AA682912, AW062724, AA610493, AI282511, AA551503, AW406755, AI538852, AI046205, AA502720, AI751216, AA503600, AA658362, AI580250, AW087356, AA610688, AI307608, AL042853, AL134972, AI473943, AA482711, AW419262, AW020340, AW169151, AW438643, AA483223, AI133164, T41259, AI925579, AA846935, AI110770, AI431303, AW303196, AW274349, AA126035; AA515829, AI358229, AA580808, AI962050, F36273, AI254316, AA533303, AA351056, AA649642, AW408047, AI149478, AW301350, AW276827, AW327868, AA610783, AL048925, AI625244, AA578997, AA632755, AIW162049, AL045053, AI929531, AI339850, AW103758, AA662225, AA483771, AW249224, AI564496, AI365988, AW029038, N66026, AA573543, AA834707, AW075511, AW261871, AA531372, AI247199, AI754658, AA826303, AI357823, AA749235, AI744188, AI358571, AI824562, AA577906, AI873852, AA478355, AA829223, AW273218, AI345157, AA568778, AW302903, AA908468, AI568678, AI338350, AW264957, AA808877, AI570261, AA492166, AA856969, AA177061, AI634384, AW166815, AI583612, AI963720, AA491831, AA737318, AA548889, AI471543, AL041690, AA631507, AA837084, AW270343, AA713815, H71429, AI567674, AI291588, AA639326, AL120269, AI865905, AL119984, AA847952, AL038072, AI654525, AA679514, AA522942, AW148792, AA569471, AI801591, AA661921, D83989, U57009, I51997, X55925, U18391, X55927, U18394, U18395, X54176, X53550, U57005, X54179, X54181, U57008, X54178, U18398, X55929, X55933, AF077058, U67801, U57006, X75335, |

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| | | | | U04355, U18399, X54180, X55924, U18393, L47228, U18388, U67831, U67832, X54175, U18387, X55931, X55923, X55922, U18390, Z22650, AF015147, X55932, M13254, M37551, AF015151, AF015156, U67829, AF015149, AF015167, Z79422, AP000558, A39972, AF015160, AF015166, AC005280, U18392, U67229, X55926, U67221, AP001172, AF109907, AC009516, AC004858, U67231, AL021977, L35531, AL033521, AP000557, AC004712, AC002565, Z49816, AC002452, AL035695, AL121603, AL031123, U67217, AL021366, AC006511, X78901, AC003966, AF042090, AC004876, Z82190, AL050097, AL121825, X88791, AL08629, L49046, AC005484, X54177, X53549, AC006213, AL109984, AL096791, AF088219, AF015158, U67827, L78810, AC005224, AL117694, AL030997, AL031005, U18396, AC006071, U67825, AC008039, AC004675, U11309, S43650, AC009411, AC004024, AC006466, AL050332, AC004383, AP000555, AL008709, AL049759, AC004263, S56773, AB023049, U57007, AP000020, AL022163, X55930, AC007848, AC002545, AL022322, AL049569, AL121653, U67227, L81648, AC006026, AL031594, AP000345, AC007324, AC010175, AC006449, AC006001, AC008101, AC007193, AP000556, AC006011, AL023882, AC006459, AC005081, AL121934, AF010399, AL035071, U18389, AC004526, AC005231, AC002470, AC003111, AC008079, AC004972, Z99716, AC005520, AC004592, AC004259, AL080250, AC005041, U90546, Z54146, AC003684, AC004600, AL035397, Z83826, U67826, AL031577, AC002476, AC004814, U14701, U14695, U14694, AC003101, AC002300, AL035450, AL031733, Z81369, AJ251029, AC004453, AL121652, AF190465, AC004686, Z98200, AC006080, AC008012, AC008115, AF045555, AC005165, U67828, AC006077, AC004217, AC006479, AC006292, AC002347, Z95114, Z69666, AC007590, AC000066, AL008728, AF099940, AL022323, AL022302, AD000092, AC006277, AF029308, AC005387, AC005771, Z98046, AC008080, AP000359, AL121754, AC006430, L78833, AC003074, AC002549, AP000228, AC004895, AL049830, AF002996, AL079295, AC004832, AC005015, Z93016, AC005253, AL133448, AC005696, AL021393, AL049594, AC002350, AP000552, AF146367, AL034561, AC006464, AP000017, AL022328, AC004158, AC006111, AC004652, AC004988, Z99129, AL050347, AL008725, AC002542, AP000140, AC005529, AP000246, AC006333, AC005209, AC008126, and AL031662. | | | | | |
| HCWEQ61 | 9121 | 741989 | 1 - 473 | 15 - 487 | AA010470, R10043, R53395, AA643595, AW172511, AI436714, AI362495, AW339340, AI858856, AW248102, and AC004230. | | | | |
| HCWEH95 | 9122 | 795046 | 1 - 263 | 15 - 277 | N58676, AA317546, AW197056, AA127538, H53508, F02188, AA074252, AL118925, W23432, AA126252, AI275982, R89560, AA612578, H87756, AA297698, AA578621, T63057, AA736480, AA730035, AA237098, AI932900, AA665475, AA747757, AA1890327, AI270177, AW022891, F31575, AA613923, T90237, AA678950, AA825827, AA086360, AW407632, R67086, AI281770, AA653713, AI132915, AA604515, AA468056, AI679390, AI679898, AA551204, AI744830, AA467938, AA071194, AI912401, AW069527, AI160682, AA002262, W60406, AI683026, AA565691, AA564925, AA302763, D83882, AI358712, AL031846, AC002511, AC005074, AC005089, AC008249, U91319, AC003091, AL031657, AC007225, Z85987, AC005726, | | | | |

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| | | AC003101, AC000393, AC005005, AC004158, AL034429, AC004865, AC005682, AC005632, AC005585, AC005318, AP000243, AP000126, AP000204, Z84483, AC005914, AC002470, AC004858, AP000692, AF109907, AP000253, AC004760, AC002044, L44140, AC011311, AL096703, AC004528, AL031276, AC005225, Z98941, Z68284, Z94801, AC003982, AL096766, AL133448, U95090, AP000565, U91326, AC007055, U80017, Z73417, AC003687, AL049653, AL022311, AL022316, AL133396, AP000135, AC007386, AC004998, Z95115, AP000031, AF196972, AL031431, AC005572, Z98743, Y10196, AC004263, AC004933, AL139165, AP000344, AC005911, AC005907, AL035659, AC004526, Z93023, AL049759, AL034423, AC006511, AC004257, AC010205, AC005881, AJ246003, AL022721, U52112, AF047825, AP000121, AP000053, AP000168, AC005006, Z93241, Z83844, AC001231, AC008154, AC006965, AC002996, AP000564, AC005015, AL031685, AL117258, AC006111, D87675, UT3167, U90094, AC001227, AC002101, AC002073, AL031732, Z98304, AL118497, AC004021, AL121658, AC010206, AC005562, AC002477, AC004996, AL031680, AC005875, U78027, AL031346, AL109613, AC007193, AC008126, AC004887, AL133382, AC004686, AC002544, Z29336, AB014085, AL035422, AL031681, AC012384, AC005793, AL096773, AC005187, AC005480, AC005081, AC002476, AF191217, AF073485, AF143315, AL035685, AF067844, AC004876, AL031577, AC004961, AL008726, AC005206, AC005921, AC004187, AC006006, AC005070, AC005358, AC002350, AC007731, AC005500, AC005328, AC005088, AL109865, AC002401, AC005667, AP000248, AC004805, AP000687, AC006271, AL035587, AC004655, AP000431, AL031407, AC008012, AL121652, AC005360, AL031284, AC004821, AC004776, AC005288, AC006539, AF196779, AC003042, AL008718, AJ003147, AL020993, AC005412, and AC003072. | |
| HCWD074 | 9123 | 576471 | 1 - 194 |
| HCWD026 | 9124 | 576470 | 1 - 204 |
| | | | 15 - 208 |
| | | | AJ023882, AC005837, Z99716, AC005046, and AC005277. |
| | | | AA363027, AW087537, AA629731, AL030959, AL031281, AC004382, AL031984, L34635, AL096677, AC004841, Z69733, AC003982, AC004448, AC005345, AC000393, AL049540, AC008044, AL049709, AL121782, AC006347, AL008726, AC008545, AC005800, AF111169, AL133500, U91326, and AC002544. |
| HCWDJ81 | 9125 | 514607 | 1 - 387 |
| HCWCR40 | 9126 | 711507 | 1 - 425 |
| | | | 15 - 401 |
| | | | AJ769123, AA831715, and W92553. |
| HCWCN11 | 9127 | 849959 | 1 - 882 |
| | | | 15 - 896 |
| | | | AA255688, N98246, N63895, AA262567, AW166611, AW131457, AI620666, AP000240, X59875, AC005793, AL122003, AL109627, AC004859, AC005008, AC004854, AC007325, AC002310, AP000355, AL034410, AC005924, AC00061, AC004508, AL033392, AC005574, AC004383, AL031427, AC004755, AC003957, AC007981, AC005014, AL121603, AL033397, AC010209, AP000552, AC00589, AP000201, AL034374, AL021453, AC002299, AL035587, AP000097, AC008018, AC008103, AC003664, AC005776, AC002091, AC005562, AL034420, AC004056, AL031186, AC004913, AF026069, AP000550, AC004686, AC006511, AL024498, AF207550, AC005971, AC007227, AL031003, L053367, U62317, AC005255, AL133353, |

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|---------|------|--------|---------|----------|--|---|
| HCWCM08 | 9128 | 849958 | 1 - 328 | 15 - 342 | | AC004975, AL079339, AC016831, AC006211, AC022324, AL022316, and AP000703. |
| HCWCL46 | 9129 | 719244 | 1 - 486 | 15 - 500 | | AA235285, and AA811938. |
| HCWCJ16 | 9130 | 411336 | 1 - 452 | 15 - 466 | | |
| HCWCJ85 | 9131 | 840121 | 1 - 376 | 15 - 390 | | |
| HCWCH85 | 9132 | 753191 | 1 - 390 | 15 - 404 | | AA812111, AW023111, AA502532, AA487272, AW265342, R95840, AW304580, AA938390, AI358712, AI290107, AA182731, H71678, F24745, AA502207, AI792439, T07922, AA501461, AA601278, AI610468, AA604843, AA070899, AL045476, AW237905, AA644090, AI635440, R66166, AW188742, AA515723, AW408756, N23913, AW243831, AA284247, AI270177, AA651632, AI2793417, AA828834, AW022934, AL044340, AA297145, AW166920, AA356376, AA604865, AI687343, AI745116, AW021161, AI096738, AA683069, R32162, AL049830, AC007386, AL031281, AC006014, AC004253, AC004890, AL009181, AC004520, U95090, U91326, AL139054, U67813, AC005488, AC005859, Z49866, AC004841, AC005581, AC005031, AL049569, AL035405, AC020663, AC007226, AC007536, AL049745, AL096702, AC005057, AL022476, AC002544, U80017, AC004605, AC003982, AC005911, AC006449, AL024498, AC006480, AP000053, AC005796, AC005730, Z93020, AC011422, AC005696, AC003101, AC004000, AL080243, Z83840, AL096801, AL031283, Z97630, AC005229, AC005841, AC006441, AC009247, AL132987, AC005187, AC005399, AC005839, U91318, AC002347, AC007151, AC003107, AP000558, AL133245, AL050321, AC008044, AL035422, U07561, AL096774, AF031078, AC005081, AC007216, AC004858, AL022165, AC019014, AL031311, AC007225, AC006141, AC006511, AF030876, AC005280, Z99716, AC006077, AC005736, AC009516, AL034417, AC004622, Z54334, AL023880, AP000344, Z96074, Z98742, U966229, AC005074, AC004531, AC005513, AP000459, AJ229041, Z93023, AC005722, AL035457, AC002365, AC002425, U15177, AP000692, AJ003147, AF196779, AC005846, AL031432, AL133246, AC005726, AL035555, AC003681, AC005527, AF111168, AL031295, Z85996, AC004893, AC005320, AC002404, AL035071, AC005914, AC004967, AC004659, AF051976, AC005256, Z95152, AC005531, AL022313, AC005632, AC005189, AC005500, AL031003, AL031680, AF006501, AC005741, AC004955, U95742, AC005690, AL121658, AF001552, AL096775, Z95114, AL022336, AC002039, AC005821, AL021707, AC005899, AC005291, AL133243, AC005971, U47924, AC004106, AC003029, AC005902, Z84474, U62293, AL121603, AC004815, AC005800, AL034553, AF117829, AF207550, AC002349, AC006312, AC005520, AL049872, AL049829, Z93244, AC002477, AC005041, AL078476, AC006013, AL022315, AC004650, AC004854, AC000085, AC002094, Z93017, AC005015, AC009542, AL079342, AC007326, AC008125, U67812, AL050317, AC002302, AC004797, U89337, AC006120, AL049869, AF073485, AC002312, AP000557, AC004476, AP000117, AC005837, AC004131, AC004922, AP000359, AL035659, AL031666, AC004448, AL031587, AC005358, AB023050, AL050318, AC000052, AC003110, AL096701, AC006088, AC005231, AP001051, Z85987, |

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| | | | | AC006001, AL049757, AC007242, Z83846, AC005529, AL031659, AC005940, AC002992, AC006512, AC005182, AC006657, AC006530, AC003689, AC007114, AL035090, U82668, AC004985, AC005004, AC002565, Z82173, AC004765, AC004408, AC007160, and AC002310. |
| HCWCH11 | 9133 | 967666 | 1 - 310 | 15 - 324 |
| HCWBM07 | 9134 | 954100 | 1 - 470 | 15 - 484 |
| HCWAN45 | 9135 | 728385 | 1 - 989 | 15 - 1003 |
| HCWA153 | 9136 | 586997 | 1 - 288 | 15 - 302 |
| | | | | AA635368, AA381762, AL039309, F31811, AA381747, AA278496, AP000553, AI096791, Z94801, AC004263, AP000255, AC005387, AC005971, AL133245, AL109628, AP000135, M87909, Z98051, AC004821, AP000031, AC004257, AL132712, AL035405, AC004858, AC002400, AP000048, AC007308, AC007285, AC002470, AL080243, AL022163, AC005288, AC004596, AC002985, AI021578, Z97876, AC009516, AL035086, AL035413, AC006271, AL034420, U62293, AL034379, AF109907, AP000211, AP000133, AC005412, AC005808, AL049569, AL121603, AC004216, AC004222, AC006449, AC004854, AB015355, AL031846, AL020995, AL121655, AJ003147, AC006468, AC003104, AC005197, AF196969, AC007842, AC020663, AF111168, AC006111, AC004526, AC002369, AC005562, AL022323, AC006121, AL034429, AC006006, AF205588, AC005796, Z69705, AC000035, AC002119, AC009247, AC004929, L78833, AC005180, Z85986, AC007226, AL121825, AL033376, AL009181, Z69653, AL022313, AC007263, AC004754, AC004754, U91326, AP000505, AC005624, AC004983, Z83844, AC005701, AL031282, AC007225, AC005520, AP000503, AL008719, AF134726, U73636, AL139054, AC004000, AL023513, AC000003, AC005015, AL031427, AC005225, AC005529, Z82244, AC004874, AL031432, AC002310, AF001549, AC004967, AC004019, AC005102, AL031670, AP000512, U52112, AP000032, AC005222, AC005839, AL031985, AC005914, AC006077, AC004638, AC004478, AC005207, Z97054, AC002425, AC006285, U29953, AC005081, AL022336, AC005619, AC004814, AC000025, AC006210, AC005940, AL020997, US7007, AL031178, AL008735, AD000092, AL035448, AC004230, AC016025, AC000075, AC012384, AP000030, Z83840, Z92542, AC004228, AC006441, AC006026, AC005736, AC004690, AC004552, AF045555, AB023051, AC006505, AL022721, AC002477, AL121658, AL049694, AC006312, AL133448, AL034423, AB001523, AL031774, AP000023, AC005484, AC000052, AC006597, AF129756, AC005907, AC004991, AC005057, AC004253, Z98048, AC006001, AL049539, AC005694, AC007406, U95742, D87675, AC004531, AC004678, AC006581, AC007684, AC004771, Z93930, AC005089, AL050332, AL121653, AL034417, AL021154, AL078581, AC006023, AC005841, and AL022476. |
| HCWAB85 | 9137 | 783392 | 1 - 299 | 15 - 313 |

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| | | | | and AL021546. |
| HCWAB49 | 9139 | 529659 | 1 - 51 | 15 - 65 |
| HCWAB37 | 9140 | 575491 | 1 - 250 | 15 - 264 |
| | | | | AI053583, AW028950, AI082632, AI792539, AA320852, AA887406, AA373861, AA557493, AA513219, AA598605, AA551067, AI860423, AA513851, F30586, AI734837, AI452863, AI336771, AA715814, F35689, AA230025, AA468371, AA493789, AA224889, AA468505, AA378474, H86801, AL109984, AC005233, AC003684, AL31848, AC006450, AL031589, AC005089, AF024533, AC002395, AC007546, M63796, AC006948, AC005952, AF111168, AC000070, AC006288, AL022165, AL132987, AC007685, AL079340, AC005015, AC005527, AL008734, Z49236, AC005529, AC002544, AF205588, Z97055, AL031602, AC006512, AP000500, AC002565, AC005726, AC006023, AC005512, AC004858, AC005057, AC005914, AC002398, Z93244, AL009179, AL031431, AC005793, AC00024, AL021918, AL049776, D87011, U91326, AF109907, AL096766, AC005229, Z98036, Z86061, AC005924, AC005520, AC004838, AL049694, AC005088, AC004651, AC005519, AC00599, AL031291, Z98742, AL031670, AC002303, AC005940, AC005484, AC005828, AC004526, AL121754, AC002511, AL117337, AC004659, AL109628, AC002470, AL109627, AL049766, AL022302, AF092859, AC006146, AL022311, AL021940, Z86063, AC006453, AC006079, AC006111, AC005218, AC004811, AC005880, Z86090, AC007227, AC006451, AC004851, U62293, AC006441, AC005071, AC003108, AC005231, AC006011, AB013924, AC003667, Z93930, AC009275, AL022316, AC005081, AC006952, AC005004, AC007386, AC006211, AF196972, AC004777, AC004804, AL080243, AC002287, AL035587, AL132712, AF111170, AC005808, AC005076, Z97054, AC004525, AC006468, AR004690, U07561, AC004849, AL109798, AC009516, AC007376, AL022320, AC004770, AC004491, AC004771, AC004228, AC005632, AL031284, AC004106, Z97630, AL034449, Z83846, AL133163, AC005730, Z75407, AC009247, AC004890, AL049869, AC007151, U02051, AC004893, AL121603, AC004148, AC004765, AC005666, AC004883, AC004854, AL021393, AP000113, AE000660, AP001046, AC005625, AC005874, AF134471, AL031767, AC004938, AL050307, AC007283, AC008115, AC007566, AL135960, AJ131016, AC004560, AL020997, AC006277, AL096761, AP000116, AC007030, AC008041, AC002997, AL031133, AL096791, AL022326, AJ251973, AL035659, AL022312, Z98052, AC011311, AL034549, U61981, AC005306, AC004929, AC005772, AC008056, AF001552, AC003041, AC009721, AC004805, AC005871, AC007999, U07563, AC003025, AC006597, AL022322, AL121653, AC004881, AL021155, AL024498, and U89335. |
| HCWAB36 | 9141 | 529660 | 1 - 230 | 15 - 244 |
| HCWAB35 | 9142 | 416968 | 1 - 209 | 15 - 223 |

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| | | | | AC007099, Z95114, AC002477, AC007637, Z98742, AC005696, AL096678, Z98743, AL031657, AC006328, AC005193, AL022326, AC005225, AC007899, AL022315, AP000355, AJ246003, U07000, Z98946, AL031229, AC005089, AC005377, AC005971, AL022328, AC005625, AL121658, AL022476, AC007845, Z98304, AL031428, AL022302, AC004408, AC004491, AC005969, AC006254, AL117258, AC006515, AL096774, AC016026, AC005519, AC005527, AL031597, AL121652, AP000212, AP000134, AP000354, AL031848, AL031668, AC004796, AL049694, AC006121, AC004605, Z84469, AC006277, AC008033, AL139054, AC004073, AC006454, AL050338, L44140, AP000502, AL109952, AC007666, AC007201, AP000688, U73023, AP000555, Z85996, Z84487, AC005747, AC005015, AP000010, AC005529, AF038458, AL031710, AC005412, AL137100, AC005257, AC007686, AL078477, M29929, AC005702, AC000159, AC004148, AL133245, AC004967, AL049653, Z93017, AF134726, AC006946, AC004383, AC004851, AC005081, AC006317, AC006070, AP000251, AC005829, Z86061, AC006480, AC004878, AL035460, AC006241, AC006039, AC002389, AC005071, AC004024, AC004644, AC004686, AC004685, AC010170, AL031177, AL133500, AC005911, AP000557, AL035684, AC007226, Z95115, AC016025, AC007225, AL022334, AC006111, AL031284, AC005067, AL031650, AC005620, AC004228, AC006312, AL049872, AL022163, Z83838, AC002369, U47924, AC005102, AC006512, AL121603, AL049748, AC006552, AC006538, AF109907, AL034429, AC004821, AL080243, AC005229, AC006511, AC005736, AC007051, AC003029, AC006443, AC005778, AC006130, AC002126, AC007919, AC005004, AP001052, AC007298, AL133512, AP000030, AL021917, AC006211, AC007314, AC004386, Z98749, AC005954, AC005484, AC004217, AB023051, Z99943, AL022314, AL031289, AC004400, AL121754, AC004675, AC005300, AC006061, AC004955, AC002565, AL031767, AC008055, AL023799, AC005399, AC007279, Z98941, AC006127, AC006966, AC007488, AC004858, AC003108, AC005921, AC005914, AL109798, AL031730, AB017567, U826668, AL135744, AC002470, AC005358, AL133238, AF205588, AL049758, AC005746, AC004447, Z68284, L05367, AC003036, AL031291, AF088219, AC007151, AC002996, AL022312, AP000257, AF187320, AF196779, AC002400, AL031673, AC009248, AL020997, AC005594, AC005180, AC006077, AL034423, AC006160, AL121653, Z699117, AC004883, AC005839, AC003013, AL122023, AC007011, and Z98885. | | |
| HCWAB25 | 9143 | 575270 | 1 - 151 | 15 - 165 | AA630672, AW148507, H18914, AL047429, AA640410, AA640430, AA127426, A1292257, AI537772, AI249473, AA838190, AI054354, AA720732, AA961035, AI251576, AA664942, AA283730, AA128511, AI630176, AA954924, AI040051, AI306232, AA324242, AI434695, AA018207, AA714011, H25921, AW410354, AA101689, AA101689, AA1341571, AA629872, AA507612, AA583466, AW303096, AW268291, AW274191, AI802801, AA504049, AA507187, AI783549, AA749235, AA574442, AI085867, H29511, T06598, AA661499, AA583394, H15652, AA993818, AA610509, AA070345, AA535216, AL044940, AI02744, AA629540, AW439555, F15832, AI460009, AA554634, AP000012, AP000153, AC005578, U67820, AC000087, AC007536, | |

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| | | | | AL034379, AC006509, and AC007536. |
| HCVAC80 | 9146 | 529688 | 1 - 302 | 15 - 316 |
| HCVAC73 | 9147 | 529687 | 1 - 352 | 15 - 366 |
| HCVAC72 | 9148 | 529693 | 1 - 247 | 15 - 261 |
| HCVAC70 | 9149 | 507284 | 1 - 801 | 15 - 815 |
| | | | | AA196390, AA196468, AA507837, AI537538, AA845293, AI051037, AI500454, AL038936, F27015, AI446601, F23315, AA772016, AI982634, AI954525, AI744949, AI708005, AA064938, AA229444, AW157005, AC001228, AC005996, AC005210, AC007436, AJ003147, AC005399, AC005725, AC006486, AP00038, AP00106, AL031255, AC005324, AC005539, AL022163, AL049569, AL009179, AL031685, AL021938, AL121653, AC007792, AC012083, AC007066, AC006544, Z93017, AC005412, AL035587, AL008715, AC007344, AC002369, AC003029, AC005536, AP000210, AP000132, AL035443, AL133245, AC005531, AC005914, AC004087, AL033392, AL031774, AL031846, AC004000, AL096767, AF091512, AL031055, AC006111, AC005722, Z95116, Z74739, AL049829, AC004209, AL109628, AL096701, U53930, AC003954, AC005696, AC005529, AC008033, AL034417, AC004019, AL034420, AC020663, AC003964, AC004918, AC002994, AC000052, AC005988, AC005089, AC004922, AP001042, AC002996, AC005081, AC005911, AL132712, AC005823, AP000248, AF205588, AL109984, AP000045, AC004921, AC006063, AC004794, AP000503, AC007899, AC005237, AC000003, AL133246, AC004652, AC005520, AC005822, AF134726, AC004996, AC005763, AC000353, AC006512, AP000556, U85196, AC004797, and AC005406. |
| HCVAC58 | 9150 | 575510 | 1 - 337 | 15 - 351 |
| | | | | AA478127, AA978079, AA504702, W31736, AA636102, AA075369, AI927261, AA678950, AA298192, N22153, AW407632, AW073498, AI929410, AI753672, AA469441, AI750950, AA745302, AW057873, AA578621, AA847427, AA847508, AA662615, T03678, AI921619, Z98474, A708651, R17935, AA076130, AA743299, N55076, H65911, AA467774, AA196412, Z98475, AI932871, AA834686, AA491985, AA748102, AI799421, AA282951, T59438, AA250776, AA856817, R48980, AI348467, AA302763, AA115865, AA48687, AA363957, N30016, AI569700, AA507993, AA524821, AI924954, AI908424, T86603, R53995, AI251024, AA065155, AA247477, AI453160, AI564294, AC007671, D83737, AC006962, AC006057, AC003013, Z96776, AC004611, Z99127, AC005663, AF155238, Z83840, AL049709, AC005664, U82671, AC007358, AL035405, AC006547, AL031659, AL121757, AC004825, Z79998, M33132, AC004185, AC006047, AL078611, AC000091, AC004656, AL049612, AC004992, AC004100, AP000509, Z98036, AC005552, AC006064, AC005081, AC002365, AC009294, D84394, Z69366, AP000228, AP000140, AP000088, AC006479, AF147446, AC005775, AC004466, AD000092, AF078847, AL133245, Z80999, AC005765, AC004257, AL031186, Z82243, AL049714, AL031732, AL021453, AL049698, AC007199, AL050321, AC002119, AL049843, AC003025, AL031276, AL031685, AL031291, AC003982, AL034402, AC004518, AC004876, AC004783, AF165138, Z95115, AC004540, Z94277, AC004967, |

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| | | | | AL133163, AC004560, Z98884, AL031311, AL096791, AC006241, AF196779, AL022721, AC002301, Z93017, AC005102, AC02059, AL035684, AC007934, AC004821, AC008124, AP000688, Z84466, AF205588, AL020997, Z96074, AC005081, AP000031, AC012085, AC006480, AC005786, AC002985, AL117337, AD000092, AC006958, AL049839, AL035659, AC004832, and AC004985. |
| HCUHT37 | 9167 | 575794 | 1 - 236 | 15 - 250 |
| HCUHT26 | 9168 | 681874 | 1 - 105 | 15 - 119 |
| HCUHT13 | 9169 | 657795 | 1 - 230 | 15 - 244 |

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| HCUHH95 | 9175 | 941943 | 1 - 2159 | 15 - 2173 | <p>AW151541, AI521525, AW020150, AL041924, AL041375, AA904211, AI926102, H71678, AA703818, H77492, AA487569, AI299891, AI819419, AA525753, AW008184, F29968, AA809125, AA601712, AA489390, R99253, AI984168, AI473671, AA557945, AA226356, AI358928, AA420801, AW23841, AA669238, AA019973, AJ831714, AW238712, AI75387, AW338035, AW338021, AA533660, AA523812, AA013168, AI434686, AA425283, N92588, AI338117, AI800426, N54538, AA814503, H59429, AI926706, AI344906, AW008217, AA636077, AA564256, AI266359, AI690379, AA1690379, AA714011, AI744963, AI537368, AW151247, AI086603, AI791659, AA595661, AI580260, H72947, AA639025, AA492298, AW238655, R44593, AA577706, AI446623, T74524, C06028, W60077, AA676592, N95424, AA829565, AI003988, H07953, AI475297, AI279417, AI936229, AA135761, AA846923, AJ136295, AC005821, AL133353, L35532, AL096701, AC005971, AC006468, AL132642, AC006480, AC004771, AC005355, AC005476, AC004694, Z85987, AC006312, AL022327, AL031311, AI023575, AC005484, AC005913, Z84466, AC006328, AC002563, AC002314, AC003982, AF207550, AC003956, AL133243, AC005215, AC002492, AC005412, AC007064, Z83838, AC004656, U47924, AC016831, AL035086, AI035462, AP000156, AC005790, AC005529, Z98200, AC005911, AC004148, AC004112, Z93241, AC006208, AF196779, AF064857, AL031295, Z97989, AC003038, AP000157, Z81364, AC007376, AC006449, AC005947, AC005082, AJ109613, AC015853, AC007546, Z82188, AC006132, AF001548, AF217403, AC005527, AC000378, Z98304, AP000552, AC004998, AP000117, AC007030, AL031276, AL008723, AC005514, AC004560, AC005014, AL109758, AC003688, AC005392, AC002476, Z93244, AJ003147, X55448, AC004765, Z94161, AC005740, AC007919, AC005534, AF196969, U78027, AC004032, AC004156, AC005067, AP000049, L44140, AC004605, AP000014, AB023050, AL031284, AP000511, AC005225, AL031681, AP000193, AC007686, AL021978, AC006006, AC007934, AC004382, AL021546, AL049759, U91321, Z98044, AC004938, AP000247, AC005781, Z83844, AC005255, AC006965, AC000025, AC004383, AP000116, AC003049, AC003041, AC006548, U63630, AC006597, AC004008, AL031602, Z93023, AC007283, AC005765, AC004448, AC008545, U62317, Z98036, AP000311, AC005602, AC007227, AC004887, AC007664, AL022238, AC002347, AJ229041, AL035587, AC005899, AC005081, Z84474, AL021918, AL035422, AC007707, Z95114, AL022330, AC007262, AC006236, AC004797, AC005004, AC000379, U89337, AC002357, AC005280, AC005193, AC008040, AL049856, AC004540, AP000240, AL121754, AC004890, Z86090, AL109984, AL049576, AL008715, AC005808, AC005013, AD000864, Z82178, AC006351, AC004801, AC004832, AC004975, AL022318, Z97056, AC007421, AC007051, AL035443, AC006163, AP000251, AC007242, AC010168, AC003690, AL021154, AC004881, AC007021, AL049709, AC005231, AC000095, AP000208, AP000130, AC002316, AC002312, AC004854, AC004650, AC003108, AL132992, AL035682, AC005940, AD000812, AC005940, AD000812, AC003950, AC004678, AC003043, AL022326,</p> |
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| | | | | AC004543, AC004009, AL031587, AC004910, AC005480, AC005046, Z98048, AC005291, AL035249, AP001052, AP000096, AC005206, AC006121, AI096763, AL121658, AF001552, AC007151, AC002477, AC004816, AP00144, AC007371, AC000353, AF042089, AC004659, AC005164, AC005569, AC006211, Z49918, AC005011, AC007917, AC005670, AC002544, AC005003, AL033517, AC005632, AC006011, AC004000, and AC005667. |
| HCUHH04 | 9176 | 927500 | 1 - 617 | 15 - 631 |
| HCUHG67 | 9177 | 751673 | 1 - 746 | 15 - 760 |
| HCUGT86 | 9178 | 784694 | 1 - 308 | 15 - 322 |
| HCUGS67 | 9179 | 751669 | 1 - 436 | 15 - 450 |
| HCUGO07 | 9180 | 953412 | 1 - 305 | 15 - 319 |
| HCUGN19 | 9181 | 716989 | 1 - 584 | 15 - 598 |
| HCUGM93 | 9182 | 792329 | 1 - 313 | 15 - 327 |
| HCUGM64 | 9183 | 745853 | 1 - 316 | 15 - 330 |
| HCUGL20 | 9184 | 668913 | 1 - 445 | 15 - 459 |
| HCUGL01 | 9185 | 916550 | 1 - 150 | 15 - 164 |
| HCUGK86 | 9186 | 785517 | 1 - 363 | 15 - 377 |
| HCUGK85 | 9187 | 783521 | 1 - 317 | 15 - 331 |
| HCUGK78 | 9188 | 773601 | 1 - 215 | 15 - 229 |

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| | | | | AL031670, AC005231, AC005484, AC016025, AL022238, AC006530, AL021026, AF165926, AC004821, AC005527, AC005520, AL035086, AC000082, AC008928, AC002476, AC005529, AL031311, AL008725, AP000694, AL049759, Z81364, AL035604, AL109963, AL035684, Z83826, AC002375, AF196971, Z93930, AP000030, AL109952, AL035681, AC005102, AC007358, AC005483, AP000502, AC005696, AF134726, AC006101, AC005523, AL021939, AC002470, AL034549, AC007011, AF196969, AL121754, AC005324, AC005563, AC006146, AL049795, AF196779, AL022316, AC000025, AL049643, Z93017, AC005516, AC007842, AL049543, AC007227, AL008629, AC007308, AF064857, AP000501, AL022323, AL133163, U91323, L78833, AL049569, AL022721, AC004185, Z82976, AC006047, AL080243, AL121653, Z95114, AC007066, U91318, Z93241, AL035422, AL024507, AC005993, AC005914, AC002477, AL022327, AC004876, AC007676, and AP000466. |
| HCUGK54 | 9190 | 730709 | 1 - 118 | 15 - 132 |
| | | | | AA484273, AA484304, AW338783, AA171478, H49471, AA650075, AF126483, AE000661, AP001052, Z84469, Z82248, AL035420, Y10826, AL132987, AC006111, AP000099, Z83822, AC002546, AP000036, Z82976, AC006026, AL080243, AL023575, AC003665, AC008040, Z68279, AF001549, AC002098, AC007685, AC002551, Z94044, AC005005, Z83838, AL021578, L44140, AC006344, AC003684, AP000260, and AC005273. |
| HCUGK51 | 9191 | 725013 | 1 - 307 | 15 - 321 |
| | | | | AA658862, AI249473, AA629872, AW130335, AI047429, AI306232, AW274191, AA6533854, AA831903, AI583466, AI251576, AI829831, AI911671, AI583252, AI188390, AA736557, AI307201, AI278678, AI570829, AI534818, AA872491, AA626432, AW084445, AW304580, AI635819, AI338386, AA613624, AA653139, AA224889, AA502991, AI890324, AI708009, AI358089, AA354822, N24133, AA715706, AI609972, AA814622, AA829036, AI612142, N33763, AA164684, AI623764, AA720732, AA776032, AW438539, AA167527, AA595661, F11718, N24793, U57009, U18398, AC004983, M87914, AL109798, S42653, U025332, AP00211, AP000133, AC020663, AF095901, Z82215, AC006285, AC005332, AC003041, AC005901, AJ003147, AC007731, AC006013, AC000070, AL109865, Z98051, AP000517, AC016025, AP000691, Z69706, AC005500, AC006077, AL031311, AC004702, AC007536, AC006509, AC006511, AL020993, AL109801, AL031295, AL049766, AC004491, AC006441, AB015355, AC005180, AC002352, AC007384, AC005914, AC002301, U50537, AC005231, U95742, AC004235, AC007216, AC002430, AC005696, AC007685, X53548, AC005225, M30688, AC005899, AF031078, Z82244, AP000555, AC004821, AC005387, AC007308, AC000052, AC005531, AC005067, AC003109, AC007136, AL035659, AC007066, Z97053, AC004000, AC005257, AL049872, AL035467, AC005190, AL023807, AC005399, Z82976, AC005726, AC005274, Z97876, AC005815, AC002425, AF053356, AL008721, AL035086, AL035450, AC006449, AC004020, D49558, AD000864, AJ011713, AP000432, AL031291, AL034429, AF015148, Z68756, AL022302, AF030876, AC002316, AC004234, Z82217, AC004583, AL035685, AL049758, AL031283, AL049576, AL096774, Z93020, U73024, AF001549, AP000558, U95740, AC005378, AC005377, AC005355, AC005359, AL021453, |

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| | | | | AC004408, AC007263, AC005212, AL031680, AL121655, AL031673, AC003029, AF039906, AC007537, AL008630, AF015149, AL133163, AC002347, AC002476, AL133245, AC009247, AC005102, AC004477, AL021878, AC007666, AC005512, AC007201, M63543, AL031005, AL022163, AC005808, U55184, AC003663, AC004019, M87923, UT73638, AC006515, AC005529, Z93017, AC000041, AC005081, AL121653, Z84469, AC002091, AL121603, AC004534, AC004858, U47924, AC006530, Z83844, AL031282, AP000692, AL021154, Z85986, AL022721, AC000025, Z46936, AL034379, AC002470, AL096791, AC004797, AC005796, AP000155, AL023575, AC004832, AL035413, AC006115, AC004805, and AL008719. | |
| HCUGK38 | 9192 | 706479 | 1 - 160 | 15 - 174 | AA329625, AW270474, F03001, AP000355, AC008115, AF017104, Z84480, AC003025, AL049631, AC005531, AL109627, AC004228, AF139813, AC022517, AC005696, AC005412, U62293, U63721, AC002470, AC006088, AL110502, AL121653, AC004491, AC005065, AC006211, AC005911, AL035587, AP000045, AC002036, AC006571, AL133243, Z98742, AC002492, Z77249, AC005072, AF038458, AC005899, U91323, AL020993, AP000153, AP000032, Z85987, AC008040, AC005049, AL031432, AC006449, AC005602, AC004887, AL049793, AC002565, AP000356, AC004967, AL022313, AC003101, AF001548, AF053356, AC007130, AC003969, AC006529, and AC006515. |
| HCUGK25 | 9193 | 678130 | 1 - 152 | 15 - 166 | AA661921, AL043289, AA401240, AI133297, AA613591, N71746, AA404287, AA4482711, AI174766, AA063173, AW275510, AW301995, AW303002, AA834707, AA702729, AA747070, A1284640, H23653, AI345366, AI130873, AW163293, AL042753, F36306, T25806, AL036037, AW075511, H71429, AA129746, AW268757, AA101689, AI368745, AA493695, AW084466, AW021735, AI821494, AL038606, AL037683, AI064952, AA483929, AI349817, AI805363, AI963720, AA809479, AL135377, AW023990, AA455670, AI583283, AI270117, AA513893, AA127426, AA618452, AW268954, AW270343, AA493975, AI345157, AL138455, AA490183, AA299189, AA669155, AW021597, H42271, AA630672, AW021207, AA584805, AA602047, AI345827, AI818231, AA047715, AI254654, AA579179, AA847499, AI027459, AI821918, AI045808, AI046156, AA758366, AI687343, AI821881, AA984801, AA757775, AL046746, AC005740, AL022721, AB023798, Z94801, L34079, Z83844, A67988, AL133448, AL078581, AL035587, AC005778, AC007382, AC008044, AL121603, AI022329, AL096701, AC004030, AF111168, AJ010770, AC004195, AP001052, AC008080, L44140, AC005261, Z83845, AC002470, AF205588, AC005548, AL109758, AC004623, AC004883, D87008, AF114156, AF111167, X06123, AC006112, AF039906, AJ03147, AL021977, AC003957, AC007193, AC004881, AL021155, AC004865, AL135744, AC002070, AL049871, AL022323, AL031670, Z82198, AC005696, AL133241, AC002527, AC002425, AC005234, AC006466, D88268, X68090, AC005280, AL117355, AC006581, AL121654, AL008726, D83989, AC005164, AC002455, AC007308, AC005971, AL049552, AC000003, AL031295, AC020663, AF126531, AC004890, AC007051, AC005907, AL049825, AC009516, AC004150, AC002350, X61109, AC005776, AC003070, AC005567, AF129756, AB020865, U677229, AP000555, AC002073, AL033543, |

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| | | | | AL049699, AC006455, AC005998, AC005094, AC005940, AP000114, AP000046, AC002549, AC005257, AL132712, AC03663, AL136295, AL035448, AF038458, AC006130, AL008718, Z98742, AC004033, AC002300, AC009233, X54175, AC005288, AC004884, AC002301, AL034420, AC009464, AC004841, AC005759, AC005081, AP000356, AC002563, AP000959, AL031178, AC007919, X54156, U94788, AL031685, AC004675, AC005203, AL023575, AC004098, AL031668, X55929, AC016026, AP000696, AC002559, AC003007, AL139054, AC005255, AL049872, AC005089, AL132992, AP000503, AF134726, Z86090, AF088035, AB026898, AF024533, AL132800, AL031276, Z96074, AC005071, AC005200, Z85996, AL109627, X67330, AF088219, AC005972, AC006071, AL031281, AL050332, AC005829, AC002395, S43650, AC004832, AP000117, AC007011, AC005529, AC004993, AP000159, AP000017, Z92845, AL021877, AL049779, AC008038, AL109628, AC007100, Z85986, AC005703, AC004985, AC005409, AC005602, AL022163, AC007536, U91323, AC000052, AC002400, AL049691, AC007201, AC005500, AC002429, AL049712, AC002091, U18394, AP000501, AC004686, AC007565, AL096791, AC007225, AP000365, AC005330, AC005375, Z82190, AL121655, AL133163, AC005488, U18391, AC006312, X54177, AL022724, AC004885, AP000240, Z98941, Z69719, AL031283, AC002126, AP000499, AC005209, X54181, AL034423, AC006014, AC005527, AC004633, AC006115, Z98744, and X55926. |
| HCUGK18 | 9194 | 666454 | 1 - 285 | 15 - 299 |
| HCUGK17 | 9195 | 424102 | 1 - 296 | 15 - 310 |
| HCUGK14 | 9196 | 657539 | 1 - 269 | 15 - 283 |
| HCUGK05 | 9197 | 932078 | 1 - 203 | 15 - 217 |
| HCUGK64 | 9198 | 746608 | 1 - 347 | 15 - 361 |

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| | Z75744, AC000026, Z83840, AC004854, AL049712, AC009516, AL050318, AL121653, AC004477, AC006505, Z83826, AC005330, AP000046, AP000114, AC002045, AC003982, AC006026, AC006251, AF001548, AC006312, AC003101, AC002314, AC000353, AC003007, AF053356, AC007041, AC004856, AL021453, AP000345, AC005914, AP000513, Z95114, AL117258, AC005940, AP000512, AC006001, AL109758, AL020997, AC004067, AC002312, AC005261, AL035659, AC004616, Z83844, AC005288, AC004150, AL022721, AL034420, AC006270, AL078593, AL031594, AC008101, AC004492, AC004167, AC004605, AC007676, AC007384, AC002565, AF111168, AC004032, AC004955, AJ246003, AC007358, AF190465, Z83822, AC002994, AC006509, AL079342, AC004526, AC006571, AP000036, Z92542, AC004596, Z94044, AC004841, AC006930, AL110114, AC004382, AL09181, AC006050, AL133485, AC005520, AC002350, U07000, AC004805, AL021155, AP000952, AC005088, AP000193, AP000045, AP000113, AC006014, AC004967, Z82244, AC005924, U91326, AC005324, AL049776, AP000350, AC004125, AC004797, Z99716, U95742, AC005920, AL096703, AC004883, AC004236, AL078596, AF045555, AL034548, AC007226, AC005666, AP000503, AC002091, AC006064, AB023054, AC007450, Z68756, AC005071, AC007191, AL049653, AC006538, AL096701, AC005488, AC000379, AC005484, AL021937, AC005944, AC007011, AC007664, AF064861, D87675, AC004662, Z84469, AP000305, AL022230, AC005089, AC002472, AC003104, AL049569, AB003151, AC005837, AL121825, AC007395, AF001549, AL133245, AC005696, AL022476, AC005067, AL049780, AC009399, AC000003, AC006057, AC007993, AC003684, AC005331, M63543, AC007151, AC004922, AL121754, AC005200, AC004151, AC005480, AC005355, AL034343, AC006948, AL049830, AC003973, AL031295, AL022315, AL008718, AL121769, AL049745, AC004966, Z98743, and AC007637. | | | | | | |
| HCUGH79 | 9199 | 775206 | 1 - 265 | 15 - 279 | AC005082, U91326, AL121652, AC002544, AC007546, AL049576, AP000207, AP000129, AF111168, and AC002527. | | |
| HCUGH64 | 9200 | 746600 | 1 - 198 | 15 - 212 | AA287351, AA501902, AI669116, AI085242, AC004596, Z84484, AC004257, AC004876, AC007263, AC008134, AC005756, AC004598, AL023553, AC013256, AL008730, AC002312, AP000499, Z98044, Z93023, AC002470, Z98884, AC006285, AF205588, AL031589, AL132987, AI049540, AC004963, AC005041, AL022316, AC007845, AC016025, AC006539, AB026898, AC004938, AC005323, AC005565, AC006487, AC004087, AL121655, AC016026, AL034549, AC005231, AC006511, AL031733, AD000812, U65487, AC004922, AC002126, AC002352, AC005015, AL022722, M23282, and AC006064. | | |
| HCUGH44 | 9202 | 716624 | 1 - 46 | 15 - 60 | AI121385, AW118338, AI039145, AW089101, AW263724, AI474221, AL135357, AW087356, AA303007, AA504818, AA774222, AA761028, AI124610, T60156, H04977, AL040653, R95139, AI630176, AA847952, AL046519, AI476089, N73872, AA843628, AA457425, AA834665, R34062, AL333016, AL038072, AF112484, AP000276, AP000275, AP000105, AP000037, | | |
| HCUGH52 | 9201 | 726052 | 1 - 268 | 15 - 282 | H85104. | | |
| | | | | | AI121385, AW118338, AI039145, AW089101, AW263724, AI474221, AL135357, AW087356, AA303007, AA504818, AA774222, AA761028, AI124610, T60156, H04977, AL040653, R95139, AI630176, AA847952, AL046519, AI476089, N73872, AA843628, AA457425, AA834665, R34062, AL333016, AL038072, AF112484, AP000276, AP000275, AP000105, AP000037, | | |

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| | AA635105, AA804962, AI002834, AA572975, AA683258, AA189117, AA302963, H93144, AI352078, AI434311, AA781010, AA587256, AI824562, AA702614, AA771811, AA587604, AA719805, AI708009, AA570227, AI191227, AA569387, H96730, T07451, AA714453, AA653957, AA133986, AA126777, AA810370, AW023270, AA565733, AL137954, AA526779, AA829223, AA364429, AA368936, H13757, AA084725, AW303196, AW438643, AW273218, AI301700, AW274349, AA856954, AI917156, AA471084, AA934680, AA908357, AI358343, T06556, AI355206, AA584790, AI003751, AI888365, AA577906, AA6683578, AA533725, AI653905, AA446657, NG8051, F04478, AA503154, AI358431, AA640900, AL038474, AA523838, AA523837, AW301350, AL044940, AI254338, AI354426, AI219406, AI002820, T41124, H64548, AB804379, AA502866, AI903462, AA469460, AA650450, AA581903, AA352803, AI246119, L47228, AC005157, AL031427, U91326, AC005544, AC003681, AP000010, AJ006345, AC006479, AL080242, AC004925, AC006079, AC002350, AF161343, AC000377, AC000004, AL008725, Z82214, AC002429, AC004075, AC007486, AC002412, AC005060, AL078613, AC004448, AF039590, AC016025, AC004808, AC006023, AC006006, AL096791, AC004890, AC004002, AL110502, AL031229, AC007748, AC004526, U91322, AC006285, AP000080, AC008012, AC007240, AL133500, AC007437, AL022165, AL031431, AL121603, AF017104, AL121852, AC006487, U67827, Z98752, AC002067, AJ246003, AC002289, AC004738, AC002465, AL022329, AL049643, AC005220, AC004916, AL035079, AC003029, AC000118, U18398, AL078621, AC009516, AF027390, AC006966, AC006207, AC005703, AC004522, AL022320, AC005191, AL035424, AC006313, AL009174, AC002407, AC005288, AC005243, AF067844, AC007488, AC002563, AC005972, AL121658, AL031054, AC000025, AC004844, AC005527, AC003693, AC005011, D83989, U57009, X54181, X54178, U57005, X54176, I519997, AC004158, X75335, AP000356, Z97635, AC009223, AC008151, AC004895, AC005023, AL022723, AC004933, AC005412, AE000659, AP000855, AL049759, AF111167, AC007406, AC002544, AC005901, AC008268, AL049779, AC002449, Z84469, AL035458, AC002303, AC004865, AL109853, AL022316, AP000160, Z68289, AC002432, AC007510, X54175, AJ251973, AC003670, AC005899, AC006252, AC000085, U04355, AP000553, AF070718, AB000882, AC007559, AC011311, AL008629, AC005007, U733332, AC005071, AC006512, AL009179, AL031965, AP00226, AC005089, AC006486, AC007684, AC005075, AC005015, AJ003147, AC007227, AL008635, AE000658, AC005536, AL033381, U14684, U14685, U14689, AP000557, AC006040, AL022311, AL021878, AC005962, AC005702, AC005670, AC004596, AC005210, U18391, U18392, U57006, U18394, AL050343, X55925, U18393, X54179, AC006130, U118390, X55932, AC006353, AC002420, U67825, AC007735, AC005529, S70707, AC004485, AC004531, AP000959, AC004150, AC006965, AC006210, AJ010770, AC005252, AC005355, AC016026, AL136168, AC004645, AI022336, S56773, AL035071, AF124730, AC006958, AP000087, AC006195, Z93783, AC007845, AC006996, U57007, AL035671, AC004544, AC005209, AL023553, AC004854, AP000038, AP000038, AP0000106, |
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| | | | | AC005343, AC005076, AL031277, UT3649, AC005342, AL031670, AL035551, AL031848, AC016027, Z99129, AP000705, AC006254, AL031584, AC005046, U58675, AF128846, AF128847, AC007685, AC004745, AC016830, AL078476, AC007050, AL109938, Z94056, AL136363, AL031228, and AL034420. |
| HCUGB93 | 9206 | 850043 | 1 - 434 | 15 - 448 |
| HCUGB58 | 9207 | 736092 | 1 - 99 | 15 - 113 |

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| | | | | AC004552, U95742, AC004881, AC005969, AC008033, AL109967, AL109654, AC002543, AP000257, AC006511, AC005037, AC005486, Z69706, AC005971, U40369, AF165926, AP000493, AF199339, AL020994, AL021937, AC000029, AC003102, AL050308, AC005332, AC007731, AL121825, AC005668, AC005253, AL033392, AC004263, AC002984, AP000656, AC005391, AC005379, AL096761, AL049776, AC008055, AC005846, Z94277, AC005632, AC005011, AF001549, AL031575, AP000230, AC005274, AC004799, AE000659, AC004854, AP000442, AP000110, AB020862, AP000144, AL121655, Z97876, AC005899, AP000348, AC006146, U63313, AC004242, AF003626, AC004969, AC006077, AC007934, AL021155, AC002126, AC000025, AC005527, AL023807, AC005015, AC005529, AB023051, AJ246003, AC004002, and AL109807. | |
| HCUGB37 | 9208 | 706468 | 1 - 194 | 15 - 208 | AJ274773, AL044966, AA642918, R99617, and AC005822. |
| HCUGB22 | 9209 | 575851 | 1 - 339 | 15 - 353 | |
| HCUGB20 | 9210 | 669742 | 1 - 314 | 15 - 328 | AI741850, AA595206, AA720782, AA081138, AA668973, R08918, R09410, AI261358, Z93023, AC004491, AL031255, AC007308, AC005702, AP000502, AC005089, U85195, Z83844, AE000658, AC006441, AC004596, AC005568, AC002310, AC005874, AF134471, AC006254, AL133445, U91323, AC005102, AC005057, AC004837, U91321, Z98044, AC004893, AC004813, AL049830, AP000555, AC004895, AC006449, AF196969, Z84466, AC005412, AC004531, AC011331, AC005031, AL0222324, AC004167, AC002470, AC005841, Z98050, AC006013, AC006141, AC004777, AC008040, AB000882, AC007676, AC004686, AF049895, Z82195, AP000501, AC000353, U95739, U80017, AC007298, AL109758, AC006252, AL132992, AC006285, AC004031, AL034548, AF111167, AC005330, AC007786, AL049569, AL009181, AL031447, Z47046, AC005231, AC004638, AB026898, AC005071, AC000026, AL049795, AC004242, AC005921, AC005081, AL096791, AC007546, AC002551, AC005678, AF053356, AF031078, AL021578, AL031589, AC004087, AF196779, AC005086, AC003684, AC006238, AL132712, AC002472, AD000991, AF030876, AC005971, Z95115, U47924, AC006277, AL033392, Z85986, AP000355, AP001067, AC006480, AC004882, AC004927, AF129756, AC007664, AL023553, AC006071, AP000116, AP000049, AC006084, AC002059, AC003077, AL031283, AC006537, AL031775, AL049761, AF111168, Y10196, AC005072, AC004963, AP000493, AC004526, AC004612, AL031289, AP000311, AC007216, AL031003, AL049570, AC005696, and AC005049. |
| HCUGB14 | 9211 | 854035 | 1 - 363 | 15 - 377 | AJ251002, AJ205126, AA515435, AA886584, H64777, AW243698, AW088202, AJ929531, T08438, AI358571, AI446464, AW029038, AA634146, AA348929, AW162049, AL038785, F36273, AI962050, AW166815, AA229785, AA729721, AI133636, AA826303, AI1339850, AI904894, AI567674, AA713815, AI917271, AI469003, AI625244, AA669416, AI890923, AI281881, AL046409, AI679782, AW440836, AL120674, F17761, C05755, AI608626, AA483068, AA350859, AI064864, AW276827, AA347368, AL119391, C06327, AI754955, AI083946, U51696, AI866956, AI083998, AI083998, AI081095, AF150152, AJ918421, AA719080 |

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|---------|------|--------|---------|--|---|--|
| | | | | AA828704, AA644207, AA837084, AI357796, AI281697, AA657533, AW161752, AW162570, AI608966, W79504, AI744827, R91159, T06828, A1279873, S75337, Z98754, U14698, U14695, U14705, U14700, U14685, U14686, U14699, U14710, U14707, U14702, M87916, U14701, U14691, U14704, U14684, U14688, U14689, Z73986, AP000115, U14690, AC004383, AC006511, AL009051, AC007056, AF064865, AC002563, AC010722, AF053356, AC005037, AC006130, U14694, AL132718, AC005914, AC009731, AC002067, AC005661, AC008585, AC005332, AC004542, AL031846, AC004921, AC002477, AC004638, AB019438, AP000473, AL132712, AC000052, AL049830, AC005081, AC002059, AL022395, AC006352, AC007917, Z99758, AC004019, AL049709, AF107258, AC004506, AP000045, A39972, AC007284, AC005821, Z98255, U66059, AL035089, AC007666, AF11168, AP000553, AC005913, AC006374, AC005999, AL050305, AL121748, AP001053, AP000497, AC010197, AF196779, AF064857, AC005084, AC007617, AC004890; AL031054, AC006449, AC006315, AL049835, U47924, AC007542, U12580, AP000047, AC005066, AC005837, AC003088, AF015169, AF015167, AF015166, AL050348, AF015162, AF015158, AF015170, U12583, AP000275, AC006285, AF015156, U12584, U12582, AL049775, AF050154, AC003101, AL035415, AP000037, AP000105, and AC005324. | | |
| HCUFY79 | 9212 | 494008 | 1 - 551 | 15 - 565 | H47368, AW028376, AI468993, AW243945, AI921744, AI221027, AI567676, AA365049, T03613, AW273201, AW273146, AI002863, AI572680, AA657834, AW243817, AI885134, AW407007, AI370470, AA557945, H86399, AI312614, AA125758, AI308529, AA873661, AI274006, AA230221, AA362440, H47461, AA569220, AI884404, AI889177, AI567831, AA778580, AI031759, AA947352, AI003086, AA421536, AI34103, AI445768, AA640563, AA586553, AA749196, AA353081, AI281622, AI708108, AI044966, F26395, AI802268, N35135, AI376687, T063339, AI538404, R79396, AI889648, AI613487, AA935827, AI279693, AA832108, AI336206, AA364082, AW029574, AI921692, AA774119, AW337483, AA578711, AI745666, H53109, AI734076, AA657808, AI640905, AI732102, AI732101, N23099, AA664924, AA772818, AI734075, AA587835, R06030, AI567391, F32823, AA015948, AW089524, AW029626, AA297789, AI571094, AI298021, AL036536, AA599532, AA015948, AA368329, AI054090, AA648605, R64110, AA809546, H49253, AI683120, AI88050, AI251024, AI559720, AA847341, AI254770, AI284543, AA936099, AA593168, AA991640, AA351893, AI307563, R67038, AA829003, AA507990, AA219166, AI732911, H91672, F25759, AA584360, AI16058, AA385094, AI150934, AA662614, AA525156, H51612, N49298, AA353957, AA230024, AA339932, AW151523, H83899, AW020682, AA600863, AA975894, AA768179, AA610644, AA835702, AI570067, AI249853, AI038533, T16147, AI760850, AA112864, AI167715, AI065031, AI246061, AI668566, AA225566, AA225494, AA362439, F31811, AA196287, AA078754, AA368659, AA513916, AA467740, AA832104, AL049843, AB033024, Z82198, AL133448, AC006241, AL050307, AC004749, AD000092, AC004130, AL109847, AL031680, AC002991, AI022146, AC007421, AC005015, Z69364, AC005694, AC004753, AC005574, AC005566, | |

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| | | U73636, AL035249, AL080276, AC004765, AC005828, AC005753, AC002306, AC002312, AC005527, AP000280, AC007746, AL031284, AC007237, Z99716, AC005736, AC000353, AC004997, AC006049, AC007201, AC006165, AJ239318, AB023051, AC006024, AC004066, AL109799, Z82899, AC005822, AP000512, AP000107, AP000039, AC002481, AC000046, AC000038, AC005744, AC004883, AL117329, AL133163, AC005585, AL033533, AL035681, AC005529, AC005747, AC006261, AC007993, AC006077, AC006968, AF130249, AC004671, AC005519, AC009542, AC009330, AC006006, AL031447, AL031670, Z98752, AL049635, AC005531, AP001068, AC006538, U07561, AC004805, AL035588, AC005907, AL031846, AF112441, AC005524, AL035445, Z98948, AL022302, AL133312, AC004975, AC004835, AL008726, AP000256, AP000098, Z74696, AC003689, AF045569, AB000931, AC004233, Z75896, AC004643, AL049576, AL109956, AC006959, AC006409, AL031295, AC005185, AF207550, AL023775, U80460, AC007263, AC004485, AL031123, Z84469, Z83840, AL049591, AC006509, AL035659, AF146651, AC000388, AP000243, AP000203, Z98036, AL034420, AC004887, AL135960, AJ131016, AC007564, AC007021, AL132992, AC004534, AC000134, AC002449, AC004675, M27835, AC006948, Z82206, AL008735, AC004953, AL035494, AC006111, AL034402, AC007055, Z82201, AC003684, AP001056, U78027, AF08219, AL009181, AC006449, Z73979, Z93848, U82694, Z97630, AP000077, U89337, AL035699, AL031674, AC004876, Z74739, AL035079, AL023913, AL122020, Z97987, AC005666, AC005304, AL139054, AC005225, AC004132, AP000361, AP000116, AP000049, AC002060, AB019437, AC005846, AC004771, AL035422, AC002400, AJ011930, AC004751, D34614, AC005933, AL034423, Z98051, AL049569, AL049781, AC005565, AC006317, AC005412, AP000356, AL022326, U95739, AB017602, AB025285, AL050347, AP000348, AC002450, AC006162, AC005159, AC003002, AC004897, Z98048, AP000083, AP000347, AC003025, AC004904, AC006543, AC005484, AC004583, AC007130, Z83843, AL021808, AC007387, AP000354, AL033525, Z83820, AC006544, AL031133, AC003037, AC007934, AL096761, AC004131, AL050306, AL008731, AC010175, and AC005280. | | | |
| HCUFW11 | 9213 | 850054 | 1 - 495 | 15 - 509 | H90851, H90192, R10716, AA493603, N63093, R92937, AA714012, AA069926, H58474, AA745570, AA653323, T47274, AA598964, AA653202, AI732164, A1821721, AA214346, AW265139, AA669434, AW069667, AA846890, AI452778, R84431, AW068977, H29460, AI281475, M63796, AL078476, AL117355, AC004526, AC004491, AC004841, AC005800, AC005015, AF030876, AC004923, AC004477, AC005912, AC002551, AL035685, AC004685, AC007226, AF190465, AF031078, AC004217, AC006257, AL035419, AP000210, AP000132, AP000696, U66083, Z99916, AL034417, AC004929, Z98742, AF010238, AC005736, AC004598, AL121657, AC005102, AC002456, AC004257, AL033392, AL034343, Z84467, AC003102, AL031680, AC006101, AC005046, AL096803, AC010206, AL031686, Y13537, AC005081, AC004197, Z85987, AL031311, AC003670, Z95116, AC005768, AC004884, AL023284, AC002378, AC002300, AC007192, Z49918, AP000248, AC004814, AJ246003, Z47046, |

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| | | | | AC004813, Z99128, AC006011, AL008629, AC002307, AL031275, AC005753, Z84469, AC020663, AC002064, AC002429, AL121658, AL096791, AC000003, and AC005520. |
| HCUFW09 | 9214 | 625658 | 1 - 188 | 15 - 202 |
| HCUFT37 | 9215 | 706467 | 1 - 419 | 15 - 433 |

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|---------|------|--------|---------|----------|---|
| HCUFQ08 | 9216 | 959567 | 1 - 444 | 15 - 458 | AA555097. |
| HCUFP11 | 9217 | 967155 | 1 - 361 | 15 - 375 | AL037324, and W87497. |
| HCUFO96 | 9218 | 796434 | 1 - 383 | 15 - 397 | <p>AW302013, AL046409, AI610159, AL138265, AI284640, AI963720, AI568678, AI334443, AW169537, AI754955, AA623002, AW193265, AI431303, AW276827, AI350211, AW438643, AI904894, AI345654, AI085719, AI110770, AI613280, AA610491, AA469451, AI046205, AI270117, AI432270, AI305766, AW419262, AI289067, AW276435, AI037683, AI340453, AI688846, AL138455, AI859742, AW072587, AI708009, AA577906, AI471481, AW338500, AI341664, AW193432, AI499503, AI053672, AI951889, AI042420, AI801591, AI434695, AI048925, AA581903, AI312309, AL137954, AI379719, AI951928, AW238278, AI287528, AI590958, AW088846, AI754658, AW406755, AI619997, AI865905, AA758934, AI375710, AI559705, AI061334, AI814735, AI040382, AI590689, AA857486, AA977743, AI358343, AI580652, AA916371, AA780515, AI969436, AI246119, AI064864, AI890570, AI890928, AI345518, AA490183, AA491814, AW085794, AI143242, AI59251, AI298710, AA587256, AA679672, H70615, AI564496, AA569471, AW148792, AA523688, AI446464, AI467919, AA488395, AI669453, AI344844, AI357288, AI473943, AI472222, AI674873, AI801600, AI365988, AI305547, AI358571, AI345157, AI249997, AI798473, AA872067, AI692808, AI355224, AA178953, AA192740, AA680243, AI589461, AI079645, AA084070, AI928898, AW406162, AA630030, AW008952, F32808, AL044858, AI358229, AA350859, AW067900, AI282832, AW410400, AI625647, AI091495, AI281697, AI049490, AI955323, AI017024, AI653886, AI038833, AA632624, AA302648, AI357551, AI307201, F29989, AA610493, AI120269, AA621858, AA877817, AI041706, AI499054, AA669840, AA569284, AI371070, AI138421, AI049871, AC002492, U66059, AI031257, I51997, U18396, AF077058, D83989, AF015149, AF009660, A39972, U18391, U18398, AC005330, X55925, AC005015, X54175, AC009516, U18394, U57009, U18395, AC004893, AC005161, AP000552, AC002467, AC005899, AC006160, X54181, AC004675, AL031295, AF015156, AC006544, AF088219, AC005703, AC005881, AL049643, AC004019, AC004382, X55926, AC007216, X55923, AC005837, U18393, AC002310, AL008715, X54178, Z98884, AF015151, AC000052, X54180, AL033397, AL050321, AC000072, AC005071, AC005696, X76629, Z49816, AF067844, X75335, AC004448, AC002527, U57005, U57008, AF205588, AC005598, AC004388, AC004992, AC004554, AC006079, AC002347, X55932, U18392, X54176, AI031774, AC006576, AC004596, AF134726, AC002558, AC004030, U57006, AL022329, AC004673, AC005839, AC005839, AC006543, U95742, U18399, AI031577, AC007774, AC005251, AC005808, X53550, U57004, AC002564, U18390, AC004970, AI008627, AI049562, L77569, AC005066, Z99129, AF015148, AL133396, AI049856, U57007, AC006480, AP000503, U47924, AC000353, AC006205, AL035448, AC005011, AC005250, AF015147, AL049647, AC003002, AC006989, AC004808, AC004933, AF085444, AF015157, AP000127, AP000205, U85195, L81648, AC007688, U18387, AC005295, M37551, AF015150, AC008009, AC006509, AL006559, AC002094, AE006558, U02531, AC005531, AC004028,</p> |

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| HCUFO93 | 9219 | 792376 | 1 - 348 | 15 - 362 |
| | | | | <p>AC008168, U67231, AJ011930, AC008101, AC002456, X55931, X55924, AC005765, AC004690, AL096791, AC004381, Z75888, AL031447, AC006384, AL121603, AL049833, AC004638, Z96074, U67221, Z822180, Z69706, X55922, AP00474, AC016027, AC007317, AC002377,⁶ AC004691, AL137100, Z75887, AL117258, X55948, AP00501, X88791, AC004894, AJ006998, Z99716, AC005815, AC007666, AL021453, AL034449, AF001549, AF015723, M13254, AC004962, AL031391, AL049845, AC004648, AC004000, AC005002, AL096829, AL133399, AC005154, AC007055, AC003977, AC004210, AC005046, AF015153, AL132987, AC020663, AC002542, AF207550, AL033543, AC007298, AP000473, AC002984, AF227510, AC009069, AC002429, AC006571, AL035688, Z86061, AC007043, AL096861, AL049761, AC004987, AC007363, AL050318, Z85986, AC004038, AC005822, AL031446, AC005694, AC004453, AF047825, AC007676, AL096701, K03021, Y18000, AL121578, AL035541, AC008115, AL121591, AC000003, D84394, AP000508, AC003085, AC006251, AC006597, AC005081, AC004220, U67233, AC002395, AC005242, AC006946, AC005484, AP000275, AC007226, AC005527, AC005060, and AC006128.</p> <p>AA501508, A1914747, A1223948, H50970, AW021083, A1345780, A1174876, AA516164, AA230251, A1369580, N77109, AA835854, AC002472, AC003982, U96629, AC007664, AC004967, U91323, AC006547, AC002054, AC005274, AC004099, AC008018, AC007546, AP000553, AC003101, Z98884, AP001051, AF053356, AL020997, AC006141, AC005821, AF095901, Z98743, AC004590, AC005225, AL022336, AC004876, AC005952, AC004671, AC005659, AC004895, AL035071, AC004382, AC000097, AC005105, AC004882, AC005972, AF196969, Z95115, AC004707, AC007225, AC000353, Z95331, AC007036, AC002551, AC004887, AL139054, AL035685, AC006536, AL035455, Z77249, AF121781, AL049872, Z97054, AC005800, AC005295, AC005015, AC005899, AL022320, AC004985, AL049540, AC005414, AC005971, Z83822, Z93023, AC016026, AC004787, AC005822, AC005912, AF001549, AC004685, AF086284, AC004963, AC005488, AC004966, Z85986, AC005529, AC002365, AC006057, AC002511, AC005902, AL023807, AC005932, AL031230, AC004983, AC005037, AC005914, AC005520, AC005231, AC006088, AC004253, AC006084, AC007565, AC005531, AC004491, AC005387, AL049569, AC007216, AC005756, AC002302, AC007938, AC004841, AC002352, AC005089, AC005193, AL133445, AC003109, AL031657, AC005874, AF134471, AL021154, U91321, U91318, AF227510, AL049709, AL096791, AC000159, Z84466, Z95113, AC005049, AC005740, AC004031, AC007055, AC003003, AF111168, AC006026, AL109984, AC002126, AC012083, AC004453, AL049874, AC005486, AC005764, AC004383, AP000555, AF196779, AC004883, AP000499, AC006538, AC005622, and AL009181.</p> |

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| AI119691, AI270117, AI355206, AW023672, AL048925, AI281881, AA469451, AI376100, AI921649, AI061334, AA581903, AW406755, AI345654, AA610491, AI289067, AA579063, AI801600, AI589230, AA623002, AA522942, AI828208, AL044858, T54866, AW276827, AW088718, AI859742, AW238278, AA708678, AI634384, AA490183, AI344844, AI046205, AI537955, AA587604, C06327, AI708009, AI619997, AA584581, F29989, AI471481, AI334443, AI374809, AI918421, AI744995, AW408717, AI754955, AI567674, AA630925, AI365988, AA503258, AA470969, AI754658, AA503015, AI561060, AA768905, AI499503, AA468022, AI192631, AW302013, AI038785, AA720702, AA652057, AA631507, AI821271, AA613227, F36273, AI688846, AW265385, AI761471, AI654525, AW193432, AA649642, AI053790, AI341664, AA533375, AA491284, AW338086, AI951863, AI559251, AI625244, W05405, AW129001, AA714453, AI375710, AI969436, AI143242, AI57551, F32808, AI357288, AL041690, AI370878, AA984708, AI801591, AW304584, AI635818, AI890348, AW270270, AA521399, AI286356, AA521323, AI037683, AW265393, AI246119, AI053672, AA669840, AA177061, N30848, AI697208, AA523815, AA594145, AA53955, AA611948, AA577906, AA468131, AI042420, AI754336, AI860020, AI151261, AW273218, AA312845, AI796627, AI345518, AW118338, AI457397, AI121385, AA569471, AI118991, AI298710, F28204, AI472222, AI379719, AW131249, AW419262, AI696962, AI358571, AA493471, AI951889, AA525824, AI888518, AL046898, AA507824, AI471487, AI471572, AI564185, AI692808, AA346458, AA621858, AI589461, AA610493, AA847985, AA846876, AI345681, AI345675, AI085719, AI133102, C06339, AA528706, AW410400, AI745325, AI951928, AI281697, AI362368, AA826303, AA723017, AW021583, AI358343, AW245057, AI919029, AI079389, AA493708, AI625647, AI138455, AW070892, AA877817, AI135405, AI076616, AA908687, AA680243, AI499938, AI732186, AA601876, AA709005, AW148792, AI561255, AI890570, AI368256, AW406162, AI890928, AA665330, AI149478, AL024508, AI049539, AF015160, AC005520, U57007, U12580, AF015167, X74558, U18396, AI049830, AF015165, M37551, U18391, AF015166, AF015148, AC006167, AF077058, AF015153, AB023050, AC005696, AP000031, AP000511, X53550, X55925, U18390, U18399, D83989, X75335, AC007878, AI133382, AF015147, AC005037, AP000044, AP00112, U18392, U57005, AC006538, AC004099, U57006, U18394, AC005775, AF015162, AP000114, U57009, AF015151, X55932, A39972, AF015158, U57008, U57004, AC012039, AC005837, U02532, U18395, U18393, I51997, AF015149, AC005907, AI121591, AI050318, AC004167, AC002350, X55930, AC005300, AF015156, AF015157, U38672, AC006211, U91318, X54179, X55926, X54180, X55931, AC008064, AC005619, X54178, X54181, X55927, X54175, U18387, U67801, AP000556, AC005175, AC007043, AC009509, X55922, AC005535, Z69666, AL021578, AL009181, AC004825, M63543, X55923, M27161, U18398, X55924, AC007845, AC003007, X54177, AC006315, AF015150, X766629, AC004087, AI031311, AC004029, AJ225084, M63544, AI035425, AC020653, AC016026, AC016026, AC005409, AC005740, AL023575, AP000143, L47228, |
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| HCUFO43 | 9221 | 715337 | 1 - 229 | 15 - 243 |

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| | AA554201, AA679532, AA837084, AA707833, R77905, AW028392, AW341900, AW276827, F25199, AA577959, AI919265, AA715355, AI110688, AA502991, AI679782, AW276435, AW029038, AW168618, AI281881, AI434695, T41247, AA550758, AI341664, F17761, AA351056, AW270382, R80876, AA522942, AA573020, AA586458, AA713891, AA515905, AI002834, AI339850, AA507547, AA019312, AA629992, AA219225, AI192631, AA469451, AA788982, AA747070, AA984708, F18531, AA531186, AA316905, AI873990, AA757797, AA078441, AI798489, AI824706, AA502818, AI583612, AA904305, AW238583, AA829223, F17555, AA491650, AL132800, U18391, U18392, U18395, U18394, X55925, X54179, U57006, U57008, U57005, X55926, U57009, X55927, U18387, U18393, U67831, X55929, X55933, X54177, X55931, X55924, X54175, X54181, U18399, X54180, X54178, U18398, X541997, L47228, U67832, AC005907, U18390, U04355, U18388, X55932, D83989, X54176, U18400, X55930, X55922, U67801, AF023268, AL132712, U66059, X53550, M37551, AF015147, AC005523, X55923, AR000118, AD000684, U71148, U67222, AC003035, X75335, AF015157, A67988, U63630, U67217, U18389, Y09781, U67231, AF015151, Z69917, AC004453, U95742, U67229, AC002347, AC004765, AF015149, AC007216, AC007237, AC003003, U67230, AC005253, U57007, AC005102, AC004954, AC004756, AC005387, AC006002, U67233, AC004493, AC010168, AL078477, U67226, U67227, AC004070, A39972, AC006006, AL008716, AC005821, AC007242, U02532, U18396, AL031681, AC006374, AL050097, AC003007, AC005829, X88791, AC002507, AC005046, AC006210, AL035445, U67225, M37547, AC006552, AC006972, AC007590, AC006486, AC005157, U57004, AC004953, AC002289, AC007151, U91321, AC008372, AC004053, AC003045, AC007919, U67228, AC006384, AL035681, AC006204, AC002429, AP000275, AC010169, AL049845, AC008044, AC004745, AC000355, AL022400, AC005632, Z98051, AC007030, AL132799, AC005968, U67235, AC005784, AC004019, M61835, AC007051, AC000052, X03272, AC008115, AC006239, AC005495, AP000037, AP000105, AC006442, Z49816, U02531, AC005231, AR036572, U91328, AL031312, AC002377, AC005988, AL035411, AC006101, Z94277, AL022329, AC004816, AP000431, AL022722, AC007159, AP000328, AF184110, AF067122, AL035665, AC005962, Z81364, AL021546, AC004989, AC006371, AC005323, AL078463, AC004808, AL020995, AL034561, AC007243, AC005621, AC005245, AL135746, AC007262, AC006501, AC004603, AL035552, AC006285, AC003980, AL049550, AC007253, AL109801, AL034549, AL117342, AC004815, AC004933, AL023494, AC005488, AL109853, AL049766, AL136018, AC018769, AC005284, AC004947, AC007564, AC002470, AC007011, AL008720, AC005182, Z93241, AC004465, AL035543, AL023581, AP000282, AC000047, AC004833, AL050308, AC002540, AL121823, AL033525, AL031391, Z99495, U85196, AL021978, AC005009, AF010238, AC004502, AC005923, AC004152, AL121748, AC004814, AC006030, AC006271, AF128525, AC007437, AC005739, U85198, AC005754, AC000066, AF077058, AL096770, AC005484, AP000108, AP000040, AP000123, AP000055, AP000170, and X55928. |
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| HCUF036 | 9222 | 575850 | 1 - 441 | 15 - 455 | |
| HCUF024 | 9223 | 677273 | 1 - 452 | 15 - 466 | AA306060. |
| HCUF011 | 9224 | 967156 | 1 - 453 | 15 - 467 | AI267858, AI267573, AI267490, AI267216, AI267669, and AC005332. |
| HCUFN78 | 9225 | 773620 | 1 - 363 | 15 - 377 | AA442883, AW204253, N95221, N95171, AW340237, AI222434, AI812038, R31121, AA618508, AI983344, AI143805, AA879440, AI250910, AI654496, R31082, R48546, R41487, AI659922, AI698459, T98808, R79982, AA909113, R25153, H67267, R07369, R76503, R83351, R77383, H54440, R27769, H21958, and H62374. |
| HCUFM35 | 9226 | 706461 | 1 - 400 | 15 - 414 | T52610, AA283902, and AA703521. |
| HCUFL40 | 9227 | 711242 | 1 - 389 | 15 - 403 | AI538438, AA086258, AI383110, and AA112018. |
| HCUFK35 | 9228 | 706460 | 1 - 1041 | 15 - 1055 | AA190564, AI802383, AA193673, T54701, H60718, T54617, AL033527, AC005015, AC004554, AF196969, Z98200, AL080243, Z98941, AC003102, AL034379, AL009181, AC005513, AC005102, AC004889, AP000047, AF067844, AC004526, AC002378, AC002477, Z81364, AC005529, AC005523, AP000365, AL021407, U91318, AC005081, AC004216, AC009405, AP000115, AL096791, U95739, AC005755, AL121603, Y18000, AC006487, AP00696, AC004841, AC004983, AC005994, AC005291, AC004685, AL096773, AC004975, AC006312, AC004832, AL023096, AL031666, AL034417, AL023284, AL080241, AC007425, AC006449, AP000502, AF0053356, AF001550, AC003950, AL031681, AL035685, AL035422, AL049744, AL021154, and AC002302. |
| HCUFK09 | 9229 | 961145 | 1 - 424 | 15 - 438 | AA584134, AA583892, and AC006276. |
| HCUFJ08 | 9230 | 850074 | 1 - 206 | 15 - 220 | AA156314. |
| HCUFJ50 | 9231 | 974472 | 1 - 411 | 15 - 425 | AA095641, AA471338, Z66259, and Z66258. |
| HCUFF74 | 9232 | 765662 | 1 - 382 | 15 - 396 | AA100176. |
| HCUFES55 | 9233 | 731843 | 1 - 171 | 15 - 185 | AI359088, AI420695, AI419227, N92325, AA424589, AI246165, AI277557, AI123268, AI122787, N31489, AI160097, and AL031297. |
| HCUFE54 | 9234 | 730745 | 1 - 300 | 15 - 314 | AA250762. |
| HCUFDF70 | 9235 | 757280 | 1 - 629 | 15 - 643 | N73061, R10527, N53696, AI077389, AI032040, and R10119. |
| HCUES01 | 9236 | 916805 | 1 - 596 | 15 - 610 | AA565210, and AA565209. |
| HCUEQ12 | 9237 | 922556 | 1 - 435 | 15 - 449 | AA043442, W79487, AA670449, AI801522, AW152284, AW328473, AI270655, AI819023, AI884682, AW071997, AI523995, AI831391, AI827306, AW268528, AW006973, AI625967, AI719530, W79431, AW194190, AA630129, AI709152, AI207503, AW083219, AW235333, AI680026, AI797189, AW275903, AI282238, T30026, AI832628, W79332, AI970208, R14878, AI968008, AI652332, AI631584, T30434, AW196568, F20226, T47161, AW384586, AI867971, AW384680, T23926, AL047696, AW384676, AA632058, AI432606, AA043441, T34452, AW235729, AI674454, AW384658, AW003005, W79631, Z43470, AW384653, W00670, F08757, R21703, H05366, T27643, AA448723, N41797, T80148, AA316541, T32038, N98906, AI371701, H17706, AW409853, AW062715, AA075111, T31757, H23423, T36166, W23945, AW062719, |

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| HCUEP32 | 9238 | 586999 | 1 - 261 | 15 - 275 | F05919, W35174, M62128, N25478, W25399, AF113701, AC005297, and AL110153. AI284640, AL046409, AI431303, AA490183, AI270117, AA521399, AA521323, AW274346, AW193265, AI963720, AA834707, AA584167, AA623002, AT754955, AA610491, AA613203, AW088846, AI583283, AW303196, AA581903, AW274349, AI613280, AA493471, AI281881, AI860013, AL119691, AI350211, AW301350, AW268300, AI345654, AA613227, AI042853, AW419262, AI305766, AL121235, AW270382, AW302903, AT708009, AW327868, AI345157, AA720702, AA469451, AA721056, AL138265, AW028429, AA610688, AA526787, AA587604, AA877817, H56509, AI633390, AW021583, AI610920, AA682912, AI192631, AI625244, AI345681, AI345675, AI732120, H71429, AA832181, AI434695, AI696962, AA219129, AA584145, AA649642, AI536665, AA507824, AA503475, AA719292, AA503473, AW062224, AA665330, AW162049, AA531372, AI929531, AI339850, AI919265, AI038705, AI064864, AW029038, AW304584, AI358571, AI962050, AA468131, AA856969, AA829223, R888888, AA846935, AW249224, AI801482, AA775207, AI754658, AA478355, AA713815, AW088202, AW270270, AA394271, AL037683, AI249997, AI570261, AI611990, AI043719, AA837084, AA522942, AA632837, AI281468, AA548058, AI708125, AI969436, AA679514, AI917271, AA551503, AA577906, AA244357, AI889781, AW083402, AF034184, AW276817, AI798473, AI251436, AI918421, AA525824, AA846876, AA523838, AI567674, AA610493, AW439558, AI168185, AW438853, AW440836, AA771811, AA491814, AW167372, AW261871, AW069769, AI133164, AW276827, AA584195, AA582911, AI044940, AA601222, AA713891, AA482711, AL046205, AW073470, AI744995, AA683258, F27407, AA834792, AI133636, AA649781, AW166815, AA503600, AA523837, AI251002, AL134972, AI749559, AA533303, AA6611948, AA662225, AI110760, AA649705, AI473943, AI042420, AI567076, AI688846, AI053672, AI634384, AI471481, AA680243, AI679782, AA491284, AA351056, AW265385, AI890923, AI939465, AA584201, AI499938, AA599920, AW193432, AA584752, AI469003, AA601492, AA634146, F30933, AA580808, AA493206, AI368745, D83989, AF07058, X55929, AF015156, U18391, U18392, U18394, U18395, X55925, X54179, X75335, U57008, U57006, U67801, U04355, X55926, U57009, X54181, X54178, I51997, X55933, AF015147, U67831, X55927, U18396, X54180, X55924, U18387, U18393, U57004, AF015151, X54176, U67832, X54175, X55931, U18398, U18388, U67825, X53550, U57007, U18399, Z22650, U67829, U18390, X55922, X55932, U18400, AF015153, U02532, AF015149, U67211, X54177, AF015167, S43650, S75201, U57005, AF015166, A39972, AF015155, U67233, U67231, M37551, X91841, U67222, X55923, U67226, U67827, L47228, U67217, AL050097, U67229, X88791, Z49816, AC006126, U67225, U18389, AL023882, AF015158, X55930, AC005251, AF015148, Z69666, U02531, U14705, U14695, U14694, AC04686, AF015154, X76629, AF074708, M37547, AC005821, UT72787, AC002377, Z78627, AF145473, AC005291, AF141976, U14698, AL022302, AC005412, AL022163, AF088219, U67216, AC004381, S75337, M87919, AC004887, AC007043, AC004626, AF158642, AC004901, AC005694, Z81369, AC008014, AF015162, AC004592, AP000555, |
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| | | | | U49740, AC004167, UI14701, AC007848, AC005019, AC004204, E01888, E02193, U12580, AC005209, AL031722, AC002564, AC005306, AC003080, AR042836, U12582, AB020859, AC006128, AL079295, AL049553, AC004232, AP000088, AC005603, AC006277, AC004987, L81648, AF165142, AF085913, AC004940, AL121591, Z82210, AC005387, AL049647, AF015157, AC004678, AF067122, AC004771, AC000353, AC020663, AC003111, AC005102, Z98051, AF067844, AL008728, AC004650, AL031680, AC006292, AC002347, AC007298, AC005527, AC004933, UI14700, AC002300, AC006565, AC005622, AC004205, AC005703, AC005565, AL021940, AC004210, AF090944, AC006022, AC004253, M19045, AC018633, AC005253, AC009227, M22900, AL133396, AL031668, AC005046, AC002430, AF190465, AL136295, AC008372, AC000118, AC006064, Y18000, AC006367, AL133371, AC004016, AL031054, AC004859, AC005919, AP004668, AL031734, AF121781, AL121603, AC006205, Z86061, Z70042, AC004019, Z68192, AP000359, Z98752, AC007384, AL049776, Z99716, AC003085, AL096765, AC008067, AC007099, AC006251, AC004986, AR000118, AC003692, AC005366, AL096861, AC002102, AC007666, AC004883, M96868, AL136297, AC006241, AC004643, AC005288, D87675, AL078604, AC004690, AC005745, AL050308, AC004675, AL133399, AC003980, AL079340, AC005768, AC003691, Z93241, and Z82976. | |
| HCUE074 | 9239 | 576576 | 1 - 209 | 15 - 223 | |
| | | | | AW263415, AI932493, AI1333297, AI445674, AA661921, AA618452, AA279421, AA478355, AA584167, AA634889, AI499588, AA551552, AW270343, T06754, AI953275, AL138455, AW275510, AW117809, AL045808, AL046156, AA368059, AI284640, AL046409, AI334443, AI872020, AW303196, AI270117, AA468244, AW193265, AA477122, AI963720, AA635739, AW301350, AI583283, AI691091, AI345157, AA455670, AL042853, AW274346, AL046266, AA834792, AA658362, AI311927, AA515334, AI241821, AA490183, AA857486, AL042753, AI754658, AI133164, AW301995, AW002350, AW023990, H71429, AI816141, AI873852, AI004704, AL038606, AI471887, F00107, AI247199, AA719292, AA504877, AW084466, AA508359, AI754336, AI292257, AI732547, AI356665, AI350211, AA912099, AW163293, AW069769, AA483223, N58361, AA401240, AA745406, AA679634, AI370074, AW088616, AA908514, AA493695, AA568869, AI110844, AA483929, AI613280, AW083402, AI687343, AW302903, AW303002, AL042420, AI860013, AW235497, AL041690, AL037683, AA533333, AW274349, AL138396, AI307608, AW304584, AI932599, AL119713, AW088846, AA847499, AI345654, AI044940, AI027459, AA702729, AI040342, AA623002, AA019312, AA630672, AI524397, AI039584, AA013124, AI421841, AI696962, AI744826, AI633390, AA610491, AI121235, AL046205, AA453558, AA063173, AI368745, AA333658, AW023149, AI053406, AI561060, AA747070, AI537506, W01230, AI431303, AA192740, AA178953, AI047427, AI686267, AI043009, AA469451, AI369580, AW419262, H42271, AL038966, AA167055, AW168618, AA526787, AA526316, AW118539, AA487888, AA018283, AI925579, AW402237, AW075511, H18354, AI305766, AW021207, AI064952, AI805349, AA708664, AL045053, AI002510, AA083046, AW021735, AI370094, AI929627, AA601355, AA633753, AI084294, | |

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| | | AA468022, H23653, AA101689, AI633025, AA683258, AA834707, AL038498, AA502104, AA467750, AA493975, AA467932, AW264934, AW075948, AI149478, AA877935, AI469968, AA309257, AA569661, AW085780, AC007546, AC007298, X54181, AI031281, AL121603, AL049825, AC007043, AP000962, D83989, X55926, AC008101, AC004638, AC008038, AC007214, AL049871, X55927, U18394, AL021940, AL035587, AC005242, AC008080, AL035659, AB023798, AC008079, AL031123, AL109865, AC006312, AL023494, AC005406, AL021918, AC008014, AC004019, AP000161, AL031650, AC007216, AR036572, U91328, AL023284, AC000025, U95742, U62317, AL035423, AC002430, AC005527, AC003081, AL021877, AC007384, AC004650, Z98884, AC009227, AC006450, AC006211, AL033392, Z82244, AC000052, AP000275, AL096770, AC006017, AC008039, AC005632, AC004745, AP000123, AC002094, AL022322, AP000037, AP000105, AC006344, AL078477, AC004686, AL031983, AC004690, AC005046, AL117329, AC007488, U66059, AC002331, AC007011, AI003147, AC002549, AC005157, AC007130, AC004815, AC004066, AC005553, AF088219, AC002540, AC007537, AC006213, AC006239, AC006479, Z69666, AC009044, X54175, AL121694, AC004979, AC004057, AC007270, AC005253, U67229, AC004257, AC004940, AL032822, AL022163, AC003977, AC004592, AC008064, AP000143, AL133245, AP000567, AL031286, AL031293, AC007708, Z93023, AL021393, AL122021, AC007242, AP000204, AP000126, AP000244, AP000090, M26434, AC004812, AC008372, AC005066, AC005353, AC004383, AL132992, Z94277, AC002400, AC002377, AC006501, AC002045, AL008627, AC010168, AL022166, AC010722, AL009029, AC006226, U18395, AC005411, AC005909, AP001038, AL049834, AC010170, AC009247, AC006960, AC005488, AC004990, AL034549, AC006442, AC005261, AL133445, AC005284, AL049829, AC008055, AC005291, AC005914, AC004816, AC000066, U69730, AC007656, AC002440, AC002377, AC006501, AC002045, AL008627, AC007437, AC006288, AC002301, AC007671, Z94722, AP000025, U18391, AL031685, AF227510, AC005387, AL049749, AP000162, AL031428, AC007243, Z86061, AC000353, AL035249, AC007252, AC004848, D87675, AC006997, U95740, U67223, AC007064, AC005529, AF005066, AL031311, AL035402, AC010197, AC004675, AC002465, AC004626, AL096776, AC005962, AL133371, AC004987, AC002470, Z82194, AC007666, AC010202, AJ010770, AC006348, AC004160, AL031116, AC007877, Z82189, AF123462, AC005678, AC005535, AC008115, AL049776, AC002289, AC007363, AL031054, AL078593, AC005011, AC006371, AC005531, AL022722, AL008725, AL049836, AC004152, AC004953, AC008018, AP000348, AC006323, AC006143, AP000088, AF068862, AC005250, AC006005, AL023879, AC004502, AP000020, AC006058, AL133396, AF042090, AC006989, AC003085, U57009, U91322, AL034384, L44140, AC005180, and AC004612. | 15 - 548 N23656. |
| HCUEM020 | 9240 | 669764 | 1 - 534 |
| HCUEM93 | 9241 | 792424 | 1 - 385 |
| HCUEM15 | 9242 | 660450 | 1 - 356 |

T71381, T71249, T89573, and AI129177.
AI173444.

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|---------|------|--------|---------|----------|--|
| HCUEL24 | 9243 | 677300 | 1 - 468 | 15 - 482 | H23054, and R5453. |
| HCUEL07 | 9244 | 955587 | 1 - 548 | 15 - 562 | AI573289, AW295640, T62516, and T62587. |
| HCUEG27 | 9245 | 683541 | 1 - 532 | 15 - 546 | H62726. |
| HCUEF38 | 9246 | 706450 | 1 - 280 | 15 - 294 | |
| HCUED05 | 9247 | 932123 | 1 - 181 | 15 - 195 | AA425283, T94247, C15966, AI754926, AI547110, AW085751, AI523991, R51854, AA063493, AA063419, AI696455, AC005755, AL049694, AL0355086, AL049795, AC004526, AL109628, U91324, AC011311, AF088219, AL008734, AF207550, AC004675, AC004098, AP000497, AL021707, AL031668, AC007563, AC005519, AF196779, AC007051, Z93023, AC005082, AL022313, AC006509, AF084517, AC006449, AC005695, AC006511, AL133448, AC006139, AL049776, AC004263, AC004856, Z82198, AP000300, AC004000, AP000501, AC004797, Z97054, AP000359, AL022311, AC006077, AC005779, AP000496, AC003013, AL049757, AB014079, AP000344, AC005822, M63543, AL133321, AP000445, AP000113, AF001549, AC005372, AC004148, AC005067, AC005207, AC006121, AC000353, AL080243, AC004702, AC005899, AL022316, AF217403, AC004072, AC005726, M63544, AC005839, U52112, AC004491, AC006441, AC004805, AB001523, AC007934, AJ003147, AL133244, U62293, AL035420, AP000514, Z97632, Z97056, AC004236, AL022721, AL132712, AC004650, AD000092, M89651, AL034379, AC003109, AC004876, Z82215, AC000115, AR004690, L78833, AC005099, AC005225, AC002395, AC004929, AC005668, AC007919, Z94056, AC005261, AL096678, AP000355, AL008582, AC005057, L78810, Z83838, AP000354, AC005624, AC005179, AC004134, AC006211, AL035400, AL050321, AL033392, AL031427, AL096701, AL022302, AC005274, AC002559, AC004841, AL008722, AC007676, AC003065, AC003043, AC002369, AC004884, AL008716, AC005412, AC007371, AC005829, AL020997, AC005003, AL031680, AC005033, AC005251, and AC004167. |
| HCUDY74 | 9248 | 839955 | 1 - 375 | 15 - 389 | AA501344, AW086257, AI569202, AI267847, W07032, AI510838, AW088202, AA584201, AW406755, AI580652, AI255095, AA344959, AI493546, AA488395, AI358229, AW301818, AI865364, AA551509, N43577, AI547286, AA384502, AL041368, AI205126, AI989742, AW236342, AI433187, AA450199, AL138265, AW023672, AI921649, F29989, AI376100, AL036706, AW361583, AA428414, AI076396, AW074059, AI356904, AI357477, W60516, AI922654, AI564284, AI053429, AA482711, AA916039, AA658235, AI561335, AI610159, AW074398, AA063118, AA828851, AW265294, AI307426, AA826032, AA486680, F28576, AA394271, AI250019, AI365988, AI963786, AW440976, AA557325, AI569086, AI354397, AW339687, AA828680, AA593060, AI284640, AA828696, M78150, AI635272, AA723017, AA626678, AA826144, AI038279, AI016000, AI079910, AI144055, T29360, AA136829, AA515051, AI079645, AI471464, AL042856, AI291124, AI471487, T40286, AI003743, AI291268, AA679266, AA228420, AI537030, AI053816, AI054246, AI431688, F36273, AI453383, AI679782, N27353, AI871825, AW080134, AL040130, AA640900, AW301538, AA654968, AA366035, AF177861, AI648558, AI254649, AI792580, AI345241, AI792510, |

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| | <p>AI254486, AI251212, AI192631, AI192631, AW104748, AI581244, AI828463, AA714595, AA341228, AI962050, AA634855, AI951889, AW242020, AI133636, AW151884, H64777, AW069427, AW103918, AL042213, AA658093, AI049722, AA349854, F19258, C05755, AA501600, AI344844, AL120687, AA077817, F26152, C06327, AA828704, AI537185, AI249997, AA654627, AI796627, AW166815, H71429, AW410116, AI110770, AI358343, AW272758, F34558, AL040547, AI469624, AW020340, AI367975, AA661948, AW265197, AA653964, AA639326, AA843450, AI133164, AW029038, C18357, AI801591, AA024517, F37223, AW243960, AA558697, AA025083, AW249470, AW129001, AA340003, AA515435, AI890348, F29702, R06668, AA365347, AI192337, AI951928, AI954260, C18360, AI110760, C75026, C19058, AI963720, AI653809, AA132450, AI917271, AA642060, AI904894, AI683577, C17838, AI049634, AA484059, AI445516, F24284, AL120295, AA586655, AA602069, AI281881, AI216978, AI348731, AA730362, AI792864, AI733957, AW265385, AI624698, AI061334, T50436, AA229785, AI254316, AI633007, AI929531, AA743972, AW439558, AI223616, AA059154, AA192740, AC0040525, AC004606, AC004021, AL023279, AF172277, AC004073, U85195, AE000658, AL09865, AL031054, AC004884, AC003070, AC005488, AL109622, AC007567, AL049844, AL121578, AC005138, AJ006345, AP000705, AC009721, U40455, AP000355, AC004209, AL133246, AC007429, AC005145, AC003657, AC009501, AC013256, AL096701, AF117829, AL033521, AL035258, AL022394, AC002429, AL035427, AL031313, AC004385, AL022343, AP000514, AC006432, AC004887, U91327, AC008173, AL035666, AC002523, D84394, AC005166, AC008929, AF124730, AI1023877, AC006328, AL109753, AL035409, AL078644, AF002223, AC003084, AC008928, AL023582, AF064866, AC004662, AC007551, AL035552, AC006014, AC004585, AC002331, AL049589, AJ251973, AC007444, AL031671, AC006924, AC007392, AF029308, AC006257, AC005515, AC006039, AC006048, AL133312, AP00009, AL031680, AC002385, AC005084, AL078477, Z84470, AC006371, AL035397, AL132777, AP001053, AC004914, AC005856, AC009498, AE000659, Z93019, AC011362, AL109985, AC005913, AC006385, AL133249, AC002403, AL035551, AL035563, AC005544, AL031585, Z84481, AC005023, AC006365, Z84487, AP000946, AC007538, AL022725, AC009248, AF205588, AC007878, AC006287, AC002416, Z84474, AC007285, AL121823, AC007157, AC004859, AC004220, AC007179, Z84488, AL136295, AC000120, AC004158, AC005194, AL121595, US1561, AC005723, AL050305, AI109963, AC007064, AL121825, AC002464, AL031433, Z98751, AC005342, Z94721, AC007032, AC003013, AL136504, AC006458, AF123462, AP000014, AC002303, AI079306, AI117355, Z99497, AC007406, AC006384, AC006374, AP000952, AL109758, AJ006996, AJ011930, AC006145, AL008723, AL035079, AC005066, AC005823, AC006462, AC006600, AL049781, AC008179, AL122023, AC003666, AC003037, AL121852, AC006000, AF11168, AC012384, AC006120, AF126403, AC002349, AC005019, AL096699, AC002040, AC004949, AC002432, AC007919, AL078581, AP000561, AC000561, AC008009, Z95400, AC005703, Z82216, AL021068,</p> |
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| | | | | AL021307, AC006536, Z99129, AC005157, Z96811, AC001164, AC005589, AF000573, AC003693, AC004831, AC006324, AC004054, AC006459, Z77249, AC005018, AC006059, AC004069, AL008629, AC007182, AC016027, AL109733, AL049554, AC002545, AC007320, Z70051, AC016830, AC004551, AL136520, AC004933, AC007368, AL109659, AC002542, AC003990, AL118518, AC007450, AL035424, Z83313, AC006996, AL096829, AC006249, AL078463, AC009399, AC005039, AC005183, AL133371, AC004065, AC005909, AC008101, AL031121, AC006387, AL023713, AC006160, AL031073, AP000459, AC005261, AL035425, U96629, and AL049709. |
| HCUDX89 | 9249 | 974483 | 1 - 571 | 15 - 585 |
| | | | | N88601, AA247827, N84048, N83168, AA095359, N83992, N89520, AA096046, AA093224, AA247964, H58760, N88782, AA096066, AA471338, AA095641, N84718, N86694, N83993, N84712, N55698, N88518, N84830, N84829, N87989, N87898, AF039698, U48696, AF103726, S78798, AR066487, AF102850, AF045432, AJ243486, AF032922, and U39066. |
| HCUDU18 | 9250 | 850099 | 1 - 247 | 15 - 261 |
| HCUDQ81 | 9251 | 902510 | 1 - 317 | AA167604. |
| | | | | AI138265, AL046409, AI284640, AW193265, AI334443, AI963720, AI431303, AI350211, AI754658, AI613280, AI281881, AI133164, AL046205, AI270117, AI345654, AA665530, AI110770, AW327868, AL119691, AA521323, AW303196, AW274349, AW419262, AA720702, AA581903, AL038785, AW410400, AW301350, AI954260, AL041690, AI570261, F36273, AA610491, AA521399, AL042853, AI138455, AA847499, AW021207, AI679782, AL120687, AI537506, AI358571, AL037683, AA394271, AA490183, AA526787, AI254615, AW265385, AA551503, AW029038, AI890918, AI355206, AW162049, AI929531, AA649642, AA584201, AI339850, AL044940, AW088846, AI345518, AA630925, AL040921, AI962050, AA587604, AA491814, AI633390, AW269488, AW023672, AW088202, AI434695, AW088616, AI589220, AI696962, AI149478, AI048925, AI061334, AI053672, AA631507, AW069769, AW238278, AW073470, AA491284, AI471481, AI469968, AA654771, AI289067, AW407578, AI567674, H71429, AI192631, AI610159, AI623720, AW304584, AW276827, AL042420, AW265393, AI610920, AW438643, AA613227, AI368745, AW406755, AI345681, AI345675, AA857486, AI708009, AI890348, AI625244, AI473943, AW439558, AI918421, AA623002, AA482768, AW028392, AI732764, AA826303, AA569471, AA61948, AA5333725, AI341664, AW193432, AI358229, AW008952, AA713815, AW028429, AI688846, AW103509, AA877817, AA502103, AW020340, U51696, AL079645, AA682912, AW071196, C06327, AI799642, AI375710, AW080134, AI821271, AA678436, AI904894, AW166815, AI046898, AI307201, AI064864, AI133102, AI919265, AI749559, AW261871, AI005388, AA587256, AI049722, AI044858, AI085719, AW238583, AW083402, C05755, AA468131, N66026, AI619997, AA610493, AA469451, AA493708, AI305766, AI038705, AI801482, AL120674, AI046457, AI251002, AI587583, AI587565, AA908687, AA522942, AW302013, N35896, AI679132, AI687343, AW072923, AA601388, AI365988, AW104748, C75026, C06458, AA747276, AW270270, |

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| | | | | | AI823714, AI807753, AA084901, AA284234, AI312027, AI436666, AW001163, AA372073, AF076931, AF099739, AB016869, and AB019245. |
| HCUDN82 | 9254 | 779978 | 1 - 429 | 15 - 443 | T63603. |
| HCUDN71 | 9255 | 862116 | 1 - 381 | 15 - 395 | AA278703, and AW292815. |
| HCUDK08 | 9256 | 959679 | 1 - 395 | 15 - 409 | AI629017. |
| HCUDI17 | 9257 | 664109 | 1 - 214 | 15 - 228 | AA578621, AA453558, AJ243486, AC005696, AF196969, AC006211, AC005231, AL022476, AL121603, AC004805, AC004643, AC002996, Z93016, AC005295, AC006126, AC007226, AP000042, AP001069, AP000031, AC005005, AC004448, AC002302, Z82173, AL022312, AL023882, AC002073, AC005971, AL035423, U57833, and AL050348. |
| HCUDG26 | 9258 | 681985 | 1 - 419 | 15 - 433 | AA086020. |
| HCUDD07 | 9259 | 953588 | 1 - 346 | 15 - 360 | AL117375, AL133163, AC006512, AC006241, AC005225, AL050348, AC007240, AC006450, AL034417, Z98200, AL035413, AC005015, AC004973, AC005513, AC004912, AC005519, AC005003, U07563, Z85987, AP001054, AP000343, AC008134, L78810, AC005006, AL109984, AC005697, AC005300, AC004882, AC005399, AL133371, U91321, Z97054, AC006946, AB001523, AC005081, AC006465, and Z84466. |
| HCUCK58 | 9260 | 850117 | 1 - 253 | 15 - 267 | N78946. |
| HCUCI14 | 9261 | 659221 | 1 - 490 | 15 - 504 | W87347, T866228, and AW044560. |
| HCUCI23 | 9262 | 676276 | 1 - 196 | 15 - 210 | AA021595. |
| HCUCH29 | 9263 | 608615 | 1 - 680 | 15 - 694 | 103576, AA515915, AB1351839, AF196971, AC002425, AC004859, AL096701, AC004216, AC005049, AL034548, Z97054, AC006449, AF001552, AC009516, AC005844, AF196779, AL096774, AL109758, AC002544, AL023807, AC004079, AF111168, AC004999, AC002369, AJ246003, AC006064, AC012384, U47924, AC007021, AC005081, AL022320, AC006120, AL121603, AC006088, Z84469, AC005529, AF045555, M89651, AC005702, AB023048, AF118808, Z83822, AC004882, AC004019, AF111169, AC005082, Z85987, AC007055, AC003043, AC007216, AC002551, AC004491, AC007842, AC004253, U91323, AP000553, AC006430, AC005666, Z97630, Z83844, AC004526, AC004876, Z98742, U95742, AL031733, AL079342, AC007277, AC005399, AL121653, Z85996, AC005619, AL109827, AL022165, AC004150, AL049636, AC004383, AF196972, AP00134, AP000212, AL035086, U95740, AC000052, AC002115, AC005620, AP000501, Z99716, AL121658, AC002477, AC002288, AC007388, AC004222, AF134726, AC005011, AC006512, AL132987, AC005527, AC006344, AB026898, AL133163, AC004890, AP000689, AC006689, AC005067, and AC004832. |
| HCUCG40 | 9264 | 800153 | 1 - 141 | 15 - 155 | |
| HCUCG07 | 9265 | 953823 | 1 - 287 | 15 - 301 | AA807580. |
| HCUCD83 | 9266 | 781346 | 1 - 411 | 15 - 425 | N29857. |
| HCUCD05 | 9267 | 932333 | 1 - 363 | 15 - 377 | AA083732, AI968034, AI160994, and AA083733. |
| HCUBX45 | 9268 | 850122 | 1 - 497 | 15 - 511 | AI014555, AI971212, and AI765152. |

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|----------|------|--------|---------|----------|--|
| HCUBV91 | 9269 | 790368 | 1 - 431 | 15 - 445 | AA055642, AA857295, and AC002433. |
| HCUBT35 | 9270 | 850126 | 1 - 312 | 15 - 326 | N58798, AI472668, AI520984, AA295874, AA496309, AA158240, AA908682, AA610822, AA552989, AI086495, AW247156, W44559, AA372231, AI049869, AL049591, AL109952, Z97053, AI136295, AC005377, AP000500, U91322, AC010205, AC005102, AI031428, AC006536, AP000512, AC008585, AC011456, AI139054, AC005839, L29074, AF205588, AC007676, AB023049, AP000402, AC008040, AL121658, AC005390, AF042089, AL031311, AL033547, AC007510, AC005332, AC02400, AC005179, AF207550, AL035587, AC004134, AL109628, AC004882, AC006115, AC005971, AC007051, AC006952, AC004017, AL021707, AC005305, AC005409, AC007229, LI4561, AC005207, AC007055, AL020997, AL078602, and AC005288. |
| HCUBS07 | 9271 | 953861 | 1 - 386 | 15 - 400 | W86764, AI908342, and AL033518. |
| HCUBPP94 | 9272 | 574198 | 1 - 137 | 15 - 151 | |
| HCUBBP82 | 9273 | 526773 | 1 - 56 | 15 - 70 | |
| HCUBBP48 | 9274 | 577289 | 1 - 397 | 15 - 411 | H93547, AI307499, and AI022171. |
| HCUBBP34 | 9275 | 576462 | 1 - 370 | 15 - 384 | AA420546, AA524800, AI284640, AI246796, AI733856, AI669589, AW023111, H94979, T051118, AW193265, AW237905, AW440935, AI249365, AI923052, AA525331, AA635433, AW069227, AI610159, AI366555, AA847499, AI624528, AA714110, AA747757, AA502991, AI277373, AI814820, AW328446, AA992126, AA651639, AI284543, T53128, AI270117, AA630854, AI350211, AI754653, AI278440, AW023975, AI003797, AA1345497, AI567391, AA632757, AI250552, AI332615, R94909, AA570255, AI251034, AI251203, F36273, H79308, AA493808, AW303098, AA744018, AI310670, AI285651, AI251284, AI251203, F36273, H79308, AA493808, AW303098, AA311535, AA746911, AW265688, AL031282, AL022326, AP000501, X54176, AL049780, AC004125, D83989, AC007537, AC005932, AF121898, Z22650, AC003070, AC005772, AC005940, AC005368, U57006, U18392, Z83844, X54180, X55926, D87675, AC003041, AC004651, AB023050, AL020993, I51997, AC005391, U18393, AP000511, U57009, U18391, U18394, U57005, U57007, AL022327, AC006552, Z97054, AL034548, AC005261, AC004815, AC004886, Z84480, AP000553, Z97056, AL139054, AC006088, AC007371, AC003112, U57008, AC006261, AL035398, AL121769, AL121655, U91323, AP000355, AL035697, AL031255, AC004382, AF196969, AC005829, X55931, AC006257, AC008044, AC005071, AI021397, AC004893, AC006121, X54179, AC004985, AL031668, AL031276, AC005519, AL096701, AP001052, AI121657, AL049872, Z93017, AC009516, L78810, AL021918, AC004841, AP000350, AC005280, AL021154, AL022098, AP00089, AC007435, AL035086, AL121653, AC006077, U57004, AC004895, Z97630, AC004522, AC004655, AC006441, AL021453, AB001523, AC002395, AC004033, AP000142, AC000052, AC006511, AC005839, AF047825, L78833, Z84469, AC005859, AP000555, Z98200, AL109801, AL023575, AC007308, AC005747, AC002425, AC004583, AC010170, U67810, AC005257, AC007227, AC002365, AC004634, AL135744, AC003966, AC005288, AC012384, AC005620, AP000569, AL121595, AC005595, |

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| | | | AC006312, AP000694, AL133163, AC004526, AC004491, AC006965, AC005409, AC005089, AC005899, AC006241, AC007151, AC004914, AC006137, Z97876, Y18000, AC005726, AC005694, AC007193, AF111170, AC00081, AC007057, AL021937, AC004973, AP000354, AC005057, AC005258, AP000009, AC005666, AC001643, AL049709, AC007055, U96629, AC005632, AL031311, AC004799, AC004805, AC004966, AL034429, AC004887, AC004821, AL033392, U80017, Z82195, U95090, AC002326, AL023775, AC004851, AC004813, AC009247, AL031295, AC007688, U47924, AC005663, Z95115, AP000338, AP001065, AL024507, AP000500, AC004765, AL021579, AP001014, AL049694, AL117344, AP000692, AC002059, AL035685, AL034549, Z99128, U62292, AC005523, AL022336, AC005060, AC006449, AP000216, AC005529, Z73359, AC003007, AC003029, U82668, AC005740, AC009464, AL009181, U95741, AC005207, AP000503, AC004797, AL031602, AL049569, AL021546, AL049766, AC005102, AC005971, AC004099, AH031078, and AP000045. | | |
| HCUBP10 | 9276 | 961259 | 1 - 201 | 15 - 215 | AI538236, H99700, AA757426, T62078, T06731, AL041375, AC007842, AC007199, AC005971, AC005529, AL109758, AC00085, Z83844, U47924, AP000689, AC003010, AC010582, AB003151, AC007376, AF111167, AC005899, AF030453, AC005031, AC004999, AL109985, AC005921, AC005081, AC005088, AC007541, AC002072, AC005527, AC002351, AF111169, Y18000, Z98304, AC007227, AC007537, AC005377, AC009275, AC007388, M30688, AC004382, AC007051, U78027, AC007308, AC002470, AC005777, AF205588, AL035422, AC007792, AC020663, AC007057, AL049872, AC002350, AL030996, AL021937, AL050348, Z94802, AF196969, AC005255, AC004033, AP000509, AC004264, AC002073, AC002519, AL121748, AL022327, X54486, AC005027, AC005500, AC006965, AC007384, AC004686, AL022316, AC006441, AC005265, AL031602, AC004217, AC005544, AL049712, AC006486, AC005531, AC005913, AP000067, AC005231, AL031577, D00591, AC008079, AC004865, AC005291, AC006241, AC002554, AL049760, AC004522, AC004706, AC004990, AL034376, AC005625, AE000660, Z86090, U91320, Z75407, Z82244, AC006327, and AC005082. |
| HCUBO67 | 9277 | 526489 | 1 - 261 | 15 - 275 | AA533534, AA569471, AI434695, AW407578, T60681, AI801482, AA760839, AW408047, AA630672, AA502991, AI932599, F11718, AA224889, AW328202, AL048925, AI143051, F00564, AW270258, AW002350, AA829166, AC008115, AC005666, AC005800, AP000212, AP000134, AP000251, L44140, AF001548, AP000330, U95742, AL049872, AC007216, AC002312, Z68870, AC006042, AC005839, AC005231, AC002430, AC004517, AC007421, AC002306, AC007384, AP000047, AC005482, AC005520, AC005632, AC016025, AL096767, AF053356, AC005808, AC003665, U63721, AL022316, Z94056, AC005921, AL035685, AC005288, AC006275, AL135744, AL031282, AC005057, Z97053, AC001226, AC005562, AC004967, AP000115, AC004878, AP000553, AC007934, AC000553, AC004216, Z54334, AL049539, Z98742, AL096763, AL109798, AL021155, AL035659, AL137100, AC005387, AP000152, AC005667, AL035400, AC004813, AC005886, AP000252, AC005005, AC004596, AC004685, AR196779, AC004458, AC002300, U91323, AC004707, AL022302, AC006254, AC006285, |

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|---------|------|--------|---------|--|
| | | | | AC005049, AC002477, Z98742, U52112, AC004560, AC007263, U91323, U91321, AC004966, AC004033, AC002094, AL021155, AC006088, AL034343, AL1121595, AC007388, AC006014, Z97054, AP000553, AP000689, AC004002, AC005535, AC009542, AC006241, AL049692, AL050312, AC007065, AL096791, AC005793, U47924, AC007842, AC002565, AC009330, AC016027, AL031447, AC004685, AB023048, AL034555, AC002351, AC005183, AC005841, AC004408, AC016830, AF053356, AL022165, Z99587, AL021391, Z98941, AC005911, AC007199, AC006571, AP000512, AC002395, AC005387, AP000215, Z84480, AL109628, AC006443, AC004686, AC010205, AD001527, AL121652, AC004554, AL121825, AC005520, AC005086, AL031291, AC020663, AC005409, AC005899, AL034548, AC006468, AC004477, AC003982, AB003151, Z93784, AL133448, AC005488, AL109865, AC006538, AC006077, U91318, AC002116, Z95116, AC003101, AL031427, AL008582, AC005740, AL049697, AL035420, AP000251, AC006312, AC005005, AL031848, AL109839, AC008101, AC002369, AC007999, AC004167, AC005800, AC005102, AL121658, AC004938, AC004079, AF196779, AC005726, Z83819, U85195, AP000704, AF001549, AC002350, AP000102, AC003070, AL009181, AC005295, AC005531, AL033392, Z85986, AC005089, and AF200465. |
| HCUBG43 | 9283 | 576468 | 1 - 369 | 15 - 383 |
| HCUBE89 | 9284 | 785987 | 1 - 525 | 15 - 539 |
| HCUBE49 | 9285 | 723175 | 1 - 196 | 15 - 210 |
| HCUBE22 | 9286 | 409828 | 1 - 714 | 15 - 728 |

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|---------|------|--------|---------|----------|--|
| HCUAF01 | 9299 | 850153 | 1 - 405 | 15 - 419 | AL080243, AC005971, AC004216, Z85987, AL117258, AC005581, AL031659, AL049636, AL049569, AC004491, AL133163, AC005086, AL008721, AC004534, AC005089, AC005229, AC002350, AL031255, AC007546, AC012384, AL096791, AL034420, AC005702, AL034429, U91323, AC007688, AC005972, AC006211, AF047825, AC008119, AC006966, AF196779, AF001552, AC007193, AC008115, U91321, AC003035, AC002994, AL035249, AC004638, AC005237, and AL121652. |
| HCUAA92 | 9300 | 792947 | 1 - 585 | 15 - 599 | AA017432, AI190211, AI168308, AI148392, AA206862, AI361394, AI761755, AI1817338, AW005028, AI433437, AA243557, AA954313, V31550, C21014, AC005410, and AC005209. |
| HCFOP90 | 9301 | 862572 | 1 - 625 | 15 - 639 | AA593533, AI284640, W95976, AI754955, AI431303, AL046409, N75702, AI610159, AW406755, AI281881, AW303196, AI270117, AW193265, AW301350, AI613280, AA828704, AA526787, AI350211, AI149478, AW274349, AI679132, AI053672, AI619997, AA177061, N53150, AA535661, AW088202, AW276827, AA469451, AI305547, AW021583, AL041706, AI570261, AI744995, AI334443, AI345654, AW029038, AI537955, AW193432, AI962050, AI249997, AI696793, AA587604, AI471481, AW148792, AI688846, AW265385, AI339850, AW438643, AW162049, AW261871, AI929531, AI085719, AA720702, AI367975, AA758934, AW270270, AI634384, F36273, AI370074, AA525190, AA491762, AA708678, AA826303, AI821271, AI564496, AW276435, AW073470, AA984708, AA507547, AA367986, AI457397, AI919265, AI732120, AI307201, AI041690, AI917271, AI298710, AA584201, AW072923, AA629992, AW238278, AW188484, AI192631, AA482711, AA649642, AI499938, AI499503, AL138265, AW162489, AA6577835, AW157005, F34498, AI801591, AA491284, AI358501, AI871722, AI434695, AL037683, AI289067, AA514737, AI446464, AI375710, AW408643, AA126051, AA126035, AL138455, AI799642, AI200051, AI130647, AI370094, AI564185, H88666, AA847499, AL038606, AW169537, AA665330, AI047643, AA682912, AI587583, AW340844, AI679782, AI358571, AI587565, AI143242, AI246796, AI590772, AL041619, AA559290, AL046205, AI254615, AI312309, AW089322, AW339568, AA577906, AI379719, AL038785, AI754658, AW072587, AA719805, AI287651, AA515751, AA244357, AI044940, AW083402, AI357288, AA908687, AI133164, AA992126, AW406162, AI761471, F29702, AA488746, AI076616, AI537506, AI184226, AI110770, AA226715, AA837084, AI341664, AIW168342, AA362573, AI34435, AA515905, AI613345, AI148277, AI042853, AA486559, AW020992, AW270382, AA350859, AI355224, AA426277, AI267818, AI733755, H93144, T07451, AA613227, AA502155, AA551503, AA654771, AA985038, AA653618, AA557686, AA490183, AA502866, AI246119, AA630362, AI358431, AI064864, H49822, AI084070, AA730362, AI539563, AI625244, AI282832, AI119691, AA856954, AA133333, AA483223, AI286356, AA581903, H52161, H00934, AI674873, AA503473, AL120687, AI291124, AA669840, AI282310, F03525, AI168185, AA631507, AI135724, AA348311, A579179, AA601388, AW410400, AA610491, AC005785, UI18391, D83989, U18394, U18399, X55931, U57009, UI18395, X55925, UI18396, X54181, X54175, X55926, X54180, U18393, I51997, U18392, |

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| | | U18398, AF077058, U57005, X54178, X53550, X55924, U57006, AF015167, A39972, X54176, X75335, U18387, U18390, M37551, U57008, AF015160, AF015151, AC007030, X55927, AF015147, AF015149, X55923, X55922, AF015156, X55930, X54179, X55932, AC004596, AC006207, U67801, D14872, AL121577, Z22650, AL121591, AC006285, U67231, X55928, AL132641, AF015166, AF015157, X88791, AC004833, AC006002, U67221, U18400, M87919, S43650, AC000353, U67832, Z49816, S56773, AL033392, U67233, AL050097, AF015158, AL009179, AL133382, AC004381, AC007043, U95742, Z69666, AC004953, AC006292, AC007216, AL133399, AC007488, AL008709, AC005250, AC007541, X54177, I81648, U12582, AC004987, U67225, Z98043, AC006559, AC004019, AC007099, AL031777, AC006057, AC005872, AC007221, AC006111, M87916, U12580, AC005815, AL096861, AC004382, AC006071, AC002465, AC005393, AL078581, AL096776, AL121603, Z95116, AC006511, AC004650, AL049562, U67211, AC005295, AC009516, AL032821, AL049712, AF131217, U69730, AL049853, AC004638, AC004006, AF042090, AC003683, AC006045, U66059, AC005154, AL031054, AC006960, AC004940, AC006539, U12584, AC003664, AC004890, AP000018, AC002564, AL049636, AB020859, AF010238, M96868, AC004691, AC004069, AC005699, D87009, AC004643, AC003986, AC004948, AL022163, AC005323, AC005837, AC003109, AL079340, AC007243, AL008716, AC005747, AC007999, AC007298, AF001549, AL008728, AL035089, X76629, AC002402, AC006213, AL023882, AC008168, AF095855, AC005387, AL035411, AF207550, L35531, U67827, AC007666, AC004989, Z68289, AC005829, AL049544, AL031848, Z82210, M57427, AC005378, AC006501, AC010202, AC004603, AC004848, AL132712, AL109985, AC006251, AC002470, AL022722, AC002430, AC007406, AC005775, AC005784, AL031311, AC004502, AC002350, AC003007, AL109654, Z69917, AC004986, AC009330, AF064862, AL034408, AP000328, Z93930, AR036572, U91328, AC006328, Z97205, AC007011, AL031116, AC006195, AL049569, AC005529, AC007384, AP000459, AC004626, Z86061, AC002383, AC002549, AC002289, AF064865, AL008627, AC002540, AC000066, AC007206, Z98046, Z98742, AL022302, AF123462, AF015170, AC002310, AC010072, AL021453, AC004686, AL031685, AL031281, AC006323, AC002984, AC007193, AL096770, U67229, AC007245, AC005632, S70/07, and AC007677. | |
| HCF0025 | 9302 | 678200 | 1 - 543 |
| HCF0001 | 9303 | 916687 | 1 - 410 |
| HCFON45 | 9304 | 850372 | 15 - 424 |
| | | | 15 - 557 |
| | | | AA234280. |
| | | | AA776383, AA429932, AL035454, AC005736, U91326, AC006312, and AL034420. |
| | | | AI122618, AC004815, AP000010, AC005255, AC004812, AC006974, AL049691, AL031289, AB023049, AC000397, AC006344, AC006312, AL022313, AL035685, AC003043, AC005383, AC006966, AC004686, AL109984, AC000353, AC006205, AF196779, AC007664, AL009174, AL121825, AC005346, AP000260, AC004491, AC000052, AC003102, AC008033, AL023807, AI049709, AC004876, AC004150, AC004638, and AC007637. |
| HCFOF34 | 9305 | 955905 | 1 - 441 |
| | | | 15 - 455 |
| | | | AI469974, N64084, AW249948, AI889301, AA858354, F33853, AA621968, AI344766, AI887574, AI340954, AI017298, AW087878, AI951753, AW001459, AI130844, AI610421, AI859074, |

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| | | | | H95242, AI172161, AI888638, AI817694, AI368890, AI026962, AW148873, AW372205, AW439756, AI799210, AI339271, AI367802, AI565761, AI422942, AI815783, AW029098, AW130765, AI640433, AI392827, W67741, AI421728, AA564386, W77958, T49431, AA886636, H19721, AI931069, AI587063, AI538865, AA911757, AA844319, H10384, AI024999, AI205206, AA907497, AW191862, W45437, AA854454, AA827211, AI357050, W58732, AA864255, F24893, F36657, AA600782, AA319276, AI302198, AA134930, T40697, AA939271, AI339101, AI268568, AI268513, AA676629, AI424652, T23067, W72214, W67761, T15455, AW078588, AI015096, AA652639, AW009699, R41394, AA858041, T91991, T39608, AI865868, AA236441, R69121, AW075784, N85194, AA682375, W17051, AI568256, AA552013, AA780860, T39610, AA130364, AA600778, AA725773, AA808374, AI691156, AA552013, AA780860, T39610, AA586795, AI833065, AI701299, AW383883, W52014, AA863193, AA984388, W74143, AI343015, AW295572, AL039378, F32010, AA827536, AA832110, AI827029, AA737632, AA748445, AI283017, AA723536, R41283, H60450, AA052977, AI358413, AI334792, AA009996, AI452850, AI375377, AI248684, AI092250, AA642323, AA847164, AI359493, AI990198, AW088914, AA349440, AI674436, W85690, W80752, AI567578, AW003662, AA515597, AW024419, AA789190, AI955939, AA548671, AI347012, AI357262, AI659567, AA769657, AI689260, AA872184, AI824151, AA701479, AI973118, AA279182, AA838044, AA614311, AI955325, AA076347, AI625537, H17419, AW245328, AI801747, AI953399, AW072450, AI571032, AA642219, R17919, AI832421, AA069177, F13645, AW245586, AA548861, AW083759, F34935, AL137377, AC004472, M30143, AF122048, and AF100752. |
| HCFNQ62 | 9306 | 745755 | 1 - 470 | 15 - 484 |
| | | | | W84708, AI936823, AW137975, N68257, AA443187, AI417796, AA657780, H89014, H88792, AA586672, AI044918, and AI117474. |
| HCFNP09 | 9307 | 961149 | 1 - 659 | 15 - 673 |
| HCFN34 | 9308 | 485822 | 1 - 503 | 15 - 517 |
| | | | | AW007318, AI949612, AI497946, AI628977, AL119391, AW392670, AL119443, AL119497, U46351, U46349, U46347, AL119324, AL119319, AL119522, AW363220, AW384394, AL119483, AL119457, U46350, AL134527, AL119484, AW372827, AL119444, Z99396, AL119439, AL119363, AL119355, AL119418, AL119401, U46346, U46341, AL119341, AL119335, Z84480, AC004609, AC006313, AR060234, AB026436, AR066494, A81671, and AR054110. |
| HCFNG63 | 9309 | 745148 | 1 - 232 | 15 - 246 |
| | | | | AA515905, AA507824, AI355206, AW023990, AA603445, AA580808, AI732120, AI284640, AA226305, AW276435, AW021583, AA658362, AW238278, F34498, AI860020, A856954, AA613227, AI537955, AA680243, F01314, AW089322, AA908468, AA502155, AI133164, F17891, AA551553, AI564454, AA847622, AI863054, AI243584, AA092602, AI358571, X75335, D83989, X55923, U67829, U67827, M87922, M87891, U67828, AF077058, S42655, AC005523, AC005050, Z31000, AL023575, AL024507, AP000023, AC004257, AL133353, AC003663, M87919, AL035398, AC005288, AC008033, AL008718, Z98946, AL022324, AL031321, AC007406, AF010317, AC007731, AP000039, AP000107, AC005500, AL049692, AC006275, |

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| | | | | AC006480, AC005944, Z69707, AC005387, AC005081, AC007226, AL096791, AL050341, AF196779, AC004408, AF134726, AL020993, AL008726, AL078475, AC003030, AC005102, AC005730, AL031295, AC007676, AC008079, AB026584, AC007227, AC018633, AC004638, AC005832, U49740, Z98752, AF106202, AP000298, U96629, AC005529, AC005300, AC006004, AL022170, AL080317, AP00025, Z93241, AC008372, AL049776, AC004531, AP001114, AC009516, Z84572, AP001065, AC000085, AP000694, U69570, AC007191, U91326, L26261, AC007386, AC006271, AL008719, AL022237, AC004837, AL008635, AC004230, AC003043, Z83822, AF039907, AL021878, AC005231, AF038458, AC005745, AL096703, AF109907, AF141309, AC002350, AC005218, L34079, AP000280, AC000353, AC004492, AL080242, AC004019, X71875, AF001549, AC005332, AC004856, AC006312, AC004652, AF015156, AC004821, AC003684, AC004675, AC002126, AC006512, AL132777, AC004039, AC005331, AC005703, AL109914, AL031280, AC002558, AP000557, AC005004, AC005754, AC006511, AL121754, AC004034, AL031577, AL096774, AL022163, AL008715, AL009181, AL096843, AC007919, AB003151, AC005625, AC004475, AC006536, AC004703, AC005399, AL031282, and AC012085. | |
| HCFNG10 | 9310 | 848225 | 1 - 1653 | 15 - 1667 | AA452506, W94343, AA488471, AA761766, AI271809, AI673242, AW295352, AJ211131, AW084027, AA211130, W94373, AI972578, AI675734, AA211710, AI657152, H93180, AA442937, AW197446, AA436769, AA385636, AA033875, AA421160, AI650629, AA417770, AA306761, AI054242, AI261197, AA829487, AA417236, AI335132, AI053468, R29693, W94372, AW020931, AA715307, AA809974, AI540890, AI121270, AW020592, AL121328, AW019988, AI923509, AW023863, AW021178, AW020425, AI879064, AI624543, AW189802, AI557238, AI525653, AW020406, AW021777, AW021693, AW019985, AW020328, AW022826, AW022299, AI064830, AW023351, S68736, and A91160. |
| HCFNB09 | 9311 | 625697 | 1 - 191 | 15 - 205 | H49917, and AC007537. |
| HCFNA77 | 9312 | 874777 | 1 - 265 | 15 - 279 | AL041196, AI347284, AA861637, W02835, AA863177, AI818167, AI248206, AA987274, AA338877, AI199674, N29825, AW131788, AI953166, AI567464, AI025214, AI885412, AA568780, AI174734, AW138007, AW007757, AA193266, AW027175, AA614090, AL046529, AW058096, AI278213, AW169713, AI571295, AW083404, AI873719, AA864580, AI471327, AA603136, AI383280, NT0535, AA255990, AI091040, AI763323, AA761693, AA309912, AA826815, W05581, AA229402, AA229290, AI631521, AA861300, AI969567, AI373276, AW059713, AA256252, AW020876, AI376180, AI468873, AW029401, AW081231, AI923768, AI619817, AI373622, AI828734, AW008737, AI627893, AW243619, AI354627, AI610115, AI918376, AI874243, AW084117, AI932818, AI633308, AI742068, AI738660, AI540474, AI679211, AA848053, AI922278, AI334820, AI570989, AI619485, AI583308, AW055081, AI247298, AI933783, AA766618, AI583065, AI828806, AI122045, AF047443, AL122049, A57389, U94316, AL080156, E05822, S61953, A27171, AL133049, U49334, AF118070, AI137539, AI133624, AC007458, AL137300, AF182215, AJ131955, X95876, A65965, D00174, |

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|---------|------|--------|---------|---|-------------------------|
| | | | | A65943, U75378, AF113676, AL049465, AL122098, Y08616, S68736, AF085809, AF108357, X72387, AC004987, AC005156, AF012536, E15582, AF084644, AF084645, AF106934, AC005876, AL080074, AL117432, AL137556, I33391, and AF017152. | |
| HCFNA64 | 9313 | 850391 | 1 - 523 | 15 - 537 | AA424916, and AJ783939. |

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| | | | AL021154, Z83851, AC005088, AL009181, AC005255, Z93024, AC007993, AC004883, AC004699, AC006252, AC005874, AF134471, Z83838, AC005369, AC005841, AC005237, AL008582, AC005599, AL035079, AL049539, AP000085, AC006070, AC005015, Z99716, AL022323, AC007298, AC005803, AC004874, AL024498, AP000510, AD000092, AC005730, AL049694, AP000350, AC006006, AF053356, AC008372, Z97056, AC003029, AC004019, AC007686, AF134726, AC004069, AC006536, AC005914, AC005247, AL022322, AC004817, AC005049, AC008126, AC002126, AL031767, AC006211, AC005003, AL031680, AL078471, Z98742, AL049794, AC004854, AC005005, AC005899, AL031584, AC003006, AC006315, AL049745, AL109627, AC002302, AP001054, AC005837, AL109984, AP000512, AC012085, AC004961, AL136295, AP000127, AP000205, AC005529, AL096791, AL031447, AL133244, AF042089, AC007395, AL078584, AC006511, AC020663, AC004383, AL050332, AL034386, AC004686, AL031659, AL035086, AC006597, Z95116, AL139054, AC004884, AC007051, Z95115, AC004066, AL008723, AL049758, AC006123, AF111170, AL021546, AL022326, AL121657, Z98047, AC007533, AC005377, AC005516, AC004929, AC007030, AC002994, U80017, AC004881, AC006011, AP000356, AC009516, and AC004773. |
| HCFMZ90 | 9315 | 922112 | 1 - 867 |
| | | | 15 - 881 |
| HCFMW71 | 9316 | 920506 | 1 - 631 |
| | | | 15 - 645 |
| HCFMU01 | 9317 | 916695 | 1 - 548 |
| HCFMP46 | 9318 | 463278 | 1 - 565 |
| HCFMO47 | 9319 | 881505 | 1 - 357 |
| HCFML02 | 9320 | 920349 | 1 - 613 |
| HCFML37 | 9321 | 955281 | 1 - 644 |
| | | | 15 - 658 |
| HCFMH46 | 9322 | 719113 | 1 - 342 |
| HCFLY85 | 9323 | 909182 | 1 - 508 |
| HCFLY53 | 9324 | 727465 | 1 - 616 |
| HCFLY08 | 9325 | 959620 | 1 - 926 |
| HCFLV30 | 9326 | 692781 | 1 - 448 |

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| HCFLT86 | 9327 | 785560 | 1 - 546 | 15 - 560 | AA002042, AA001671, AA001672, AA694015, AC009263, and AR068552. |
| HCFLM03 | 9328 | 850403 | 1 - 488 | 15 - 502 | T64674. |
| HCFLL03 | 9329 | 850406 | 1 - 823 | 15 - 837 | AA984238, AA525888, and AA525391. |
| HCFLK10 | 9330 | 964792 | 1 - 760 | 15 - 774 | W31316, AA019148, and AC004706. |
| HCFLB24 | 9331 | 502414 | 1 - 421 | 15 - 435 | AA568314, AA610433, AI090334, AI871691, AA629679, AL044339, AA515677, AA846923, AI799421, AI049701, AI368732, AA523833, AA173334, AI039309, AI751191, T08386, AW089016, AI821722, F11421, AI732162, AI557422, AW265688, AI049630, AI821172, AI125167, AA662614, F31811, AA663074, AL046746, AA984829, AI792063, AA706202, AA586646, AA130647, M78021, AA862029, AA229988, AW272640, AA610255, AA368012, T48809, AI130709, H96146, AI526858, AW089950, T41134, AI457389, AI537995, AI719142, AA158549, AI814682, AW190277, AI636734, AA564682, F31867, AI291439, AA524846, AW023111, AA481760, AA654482, C06028, AI302156, AA020882, AI054339, AA715351, H24957, AA728861, AA807704, AL079734, AI564301, H67064, AA878492, AI370170, AA557945, AI802526, AI783911, AI114494, AI671077, AI114494, AI134332, AW166920, AA856817, W63553, AW151935, AI160786, AA434078, T17332, AA384064, AA599080, AW188742, AA323085, H40478, AA371580, R70883, AW419389, H43183, AA368329, AA569089, AI907046, AA126635, AI342677, AA598663, AI342786, AI300413, AW148775, AA326330, AA371410, AA102737, R83585, AW381823, AI376454, AA828463, D51877, H54601, T65895, AI431513, H58393, C18779, F08866, AW162750, AA595504, AI301373, A1929796, AA702618, AA357878, AA315361, AC005015, Z93016, AC005081, AP000512, Z83844, AC00458, AC004796, AC006966, AC004033, AC005189, AC006946, AP000547, D84401, AL035400, Z95116, AP000558, AP000501, AI139054, AL049776, AC005102, AL031666, AC002477, AC005519, AL031055, AC003070, AC005180, AL031281, AC005088, AC005529, Z98200, AI008725, AC003950, AL031311, AL021391, AC005089, AL034429, AC004884, AL136295, AC002301, AL031432, AC002312, AC007376, AC002300, AJ003147, AC003692, AC004815, AL096701, Z95115, Z68277, AC002425, AF111168, AP000067, AC005702, AL034417, AP000557, AC005046, AC005500, AI049869, AC004686, AL022476, U91326, AL008582, AC002550, AP000503, AL031587, AC005412, AC005280, AC005911, AC006251, AL031230, U85195, AC006241, AL049694, AL049636, AL109839, AL022329, AF134726, AC009516, AL109827, AC005193, AL031681, AC002565, AC002400, AC007386, AC005049, AL031280, AE000658, AC004650, AC004905, Z68870, AC004216, AC004791, AC005197, AC005332, AL031228, AC000353, AF030453, AC006064, AC006511, Z98304, AC007842, AC005520, AC002357, AC005839, AL050348, AC005094, AC002351, AC005696, AC005800, AF001549, AC005484, AC008009, AC002039, AC004953, AC005736, Z93930, U96629, AL020993, AC000379, AC006132, AF047825, AC004832, AP000655, AF196779, AC005209, AL034555, AP000116, AC003101, AC007546, AC004881, AC007160, AC006538, U82828, AP000553, AF196970, AP000689, AP000210, AP000132, AC004659, AL035458, U80017, AL121825, AF064861, |

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| | | Z99496, AC007686, AC006600, AL049538, AL033397, AC004890, AC005486, AC005598, AC004883, AC006211, AC006285, AC005324, AC005545, AC004000, AB003151, AC006139, AC002430, AC005972, AP000359, AC002544, AC003071, AC004876, AC004966, AC002563, AC005796, AC005899, AC003042, AL109802, AC005781, AC002418, AL031680, Z93241, AL121658, AL022238, AC003982, AC005231, AC005476, AC005619, AC005932, AC007384, AC007192, AC006942, AC010205, L78810, AL109865, AC002996, AF003626, AC002492, AC004386, Z97054, AC003108, AC006275, AC004491, AL021394, Z93017, AL080243, AL133353, AC005295, AL049553, AL008722, AC006130, AC005300, AC003110, AC005225, AC002350, AP000510, AC007014, AC004253, AP000049, AC005363, AL049780, AC005921, Z98044, AF111169, AL022721, AF109907, Z93023, AC005006, AC002470, AP000514, AL049709, AC020663, AC004099, AC004859, AC004859, AC000026, AC007057, AL035405, AL031728, AC005625, AC005920, AC007637, AC009263, AC006121, AL049779, AL009181, AC000025, AL049552, AF001550, AP000311, U47924, AC005288, AC007371, AP000555, AL035684, and AL133382. | |
| HCFDD43 | 9332 | 779327 | 1 - 216 |
| HCFCV32 | 9333 | 850413 | 1 - 528 |
| | | | 15 - 230 |
| | | | 15 - 542 |
| HCFCP77 | 9334 | 772256 | 1 - 366 |
| HCFCM75 | 9335 | 850435 | 1 - 453 |
| | | | 15 - 380 |
| | | | 15 - 467 |
| | | | |

AA119497, AA362532, AC007425, AC004953, AP000311, AP000193, AC006014, AP000117, AC005251, AL080243, AC007999, AC006071, AF196969, AC005488, AC005659, AC004841, and AC002349.

AA1826505, AI810842, AI970815, AW236631, AI400419, N66238, AA035566, and H96744.

AA1765256, AA806370, AA836325, AI590659, R39398, AA411920, AI807770, and T10620.

AA513181, AA513141, AI917156, AA491814, AI754955, AI198376, AA714453, AA652764, AA581903, N25296, AI2811881, AL133723, AI367497, AI061334, AW08058, AI246119, AW276435, AI298710, AI358343, AW301350, AW303196, AW274349, AI471481, AI357288, AA83677, AW057877, AL046409, AA515051, AA525190, AI610159, AW300625, AW338086, AI284640, AW406447, AI801600, AI624698, AI344844, AW166815, AA448231, AA452563, AW193432, AI287651, AI379719, AW303876, AI119984, F36273, AI350211, AA252763, F37169, AW419262, AW102955, AI431303, AA338486, AI375710, AI963720, AI279165, AI148277, AI580652, AW162489, AW270270, AI860020, AI613280, AI890923, AI610376, AI688846, AI053672, AW193265, AA503258, AW276817, AA557686, AI796627, AW104748, AW022379, AI355206, AW168342, AI830390, T40617, AW276827, AW162049, AI929531, AI041706, T08638, W95841, AI471543, AI887483, AI049634, AI049722, AA451612, F18974, AA340747, AI119691, AI697208, AI144330, AW029038, AI653886, AI649642, AA810318, AL043721, AA14735, AI708009, AI566794, AA643962, AA302963, AA649642, AA810318, AL043721, AA348311, AI266576, AA350859, AI358571, AA917683, AI339850, W07122, AA229814, AA499938, AA610491, AI962050, AI251002, AA594145, AA229931, AW151896, AW008317, AI334443, AA720702, AI674873, AW339568, AI345654, AI133636, AW261871, AA664407, AI619997, AA225155, AA551575, T07451, AI886164, AI305547, AI249997, AI633007, AW080134, AL120687, AA608616, AA062722, F03097, AA364224, AA653618, F30933,

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| AW088202, H86301, AA452744, AL038474, AI291268, AW341892, AA134367, AI291124, AI625244, AW406659, AA177061, AL043756, AI287451, AI357551, T06828, AI341664, W79504, AL120674, AA713815, AI252554, AI937850, AI567674, H70615, AA133986, H37777, AI446464, AA719805, AW021583, AI537955, AW440836, H64765, AI828738, AI904894, AW438643, AW302013, AI889923, AL041733, AA101626, AA810370, N71930, R91994, AW265385, AI824562, AI133164, AI289067, AI270117, AW406162, AA758934, N26137, AL138265, F18638, AI951863, AW265393, AI193007, AI561255, F29702, AA113186, AA099892, AI367975, AI343137, AI457397, AI281697, AA664535, AI754658, H85616, AL120269, AI866908, AI732186, AI371070, AA532877, AA827981, AI471464, AI340453, AF150152, AI623898, AI434311, AI273185, AW238542, AA133333, AA553465, F33121, H72402, AA598586, AA488395, AI564454, AI469003, AI679782, AI053790, AA630030, F10924, T03772, AA843450, AA514737, AW265009, AL079812, AC006001, AP000359, AL117258, AL049829, AC009405, AC010382, AL021068, AC005297, AL021368, AC000022, AL035423, AL121754, AF164343, AC004891, AI434311, AI049588, AI049780, AC007055, AC006120, Z84487, AL049759, AC007214, AL049836, Z83845, D87675, U85195, AI034402, AL049562, AL109733, AF117829, Z85987, AE000658, AC004519, AC002422, AL049569, AP000567, AC010168, AL121871, AC009501, AP000959, AC005274, AC002038, AL024505, Z80899, AC005922, AC004804, AL109939, AC005301, AC009509, AL109837, AP000548, AC005736, AP000689, AC005722, AC004140, AL031277, AL031280, AL009179, AC007227, AC007878, AJ006996, Z99716, AC004963, AC002418, AC007043, AP001068, AC002375, AP001170, Z93016, AC005771, AC004053, AL109654, AC003684, AC005730, AL022328, AC006207, AL121658, AL132800, Z84480, AL008718, AL008722, AL049766, AC006016, AC009479, AC010072, AL023875, AC004070, U85198, AC002310, AB003151, AC006254, Z92542, AC006222, AC006371, AL049712, AC006241, AC005153, AL121603, AC005102, Z98046, AC004386, AC005548, AC004855, AC003087, AC005529, AE00661, AF095855, AC002994, AC005969, AC004966, Z82216, AL109753, AL024509, AC004629, AC005527, Z80771, AC004531, AL135744, AC007262, AJ011930, AC003982, AC005839, AF165175, AL035494, AC007792, Z84814, AL035416, AL049554, AC011604, AC003003, AC004815, AC003986, AC002463, AL022315, AL035249, AC007968, AC008109, AL031670, AC006210, AC005666, AC006946, AB023054, AC006996, Z83821, AF114156, AL020991, AC005829, AL049745, AC005519, AL022725, Z84469, AC007358, AC005295, AC003951, AC004000, AC007388, AL078602, L78810, AL034369, AC004019, AL121757, AL023799, AL109662, AC011362, AC005632, AC007686, AL136297, AC008079, AC007540, AC004895, U91319, AL034449, AC004583, AC005213, AC006343, AL078612, AL022161, AC007551, Z93930, AL049699, AF200465, AJ239322, AC005188, AL031846, AL109984, AL049835, AL049743, Z83846, AC005261, AC006160, U92032, AC002301, AC006576, AC004914, AL078477, AP001037, AC007066, AC005081, AL121653, AC004502, U07000, AC007225, AL050308, Z75741, AC005562, AC006157, |
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| | | | | AL031230, AC010175, AC002430, AL031650, AC005379, AC000025, AC002036, AC005692, Z97206, AC004081, AC007064, AC005535, AC004485, AP000501, Z97055, AF042091, AL021367, AC007384, AC004527, AC007298, AC000385, AL096861, AC006277, AC004884, AL133500, AC005244, AL022396, AL031673, AL034384, AC007421, AC006480, AC006026, AC002128, AC010849, AL033397, AC004685, AL121825, AD001527, AC004949, AC008018, AC005701, AC005620, AC002412, AC005598, and N25671. |
| HCFCK25 | 9336 | 494159 | 1 - 529 | 15 - 543 |

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|---------|------|--------|---------|----------|---|
| HFCFG23 | 9337 | 850426 | 1 - 235 | 15 - 249 | <p>AC004659, AC005231, AC004531, AC005057, AC007193, AC004686, and AC005003.</p> <p>T96408, AI081046, N80094, AI269862, A1567582, AW163823, AL119791, AI538342, AW129271, AI559872, AI538270, N99092, AI279925, A1922561, AI784230, AI86573, AI500514, AI570966, AI046463, AW161156, A1254727, AI690011, AI572717, AI041772, AI358701, AI539800, AW059828, AW327393, AI432040, AI859464, AI568138, AI419650, AL041220, AA658033, AI540458, AI815855, AI499986, AI685211, AI500523, AI038605, AI581033, AI698427, AW002342, AW152000, AI590423, AW172723, AI445165, AI699255, AI335208, AL110306, AW406745, AW131999, AW148758, AI040827, AW161579, AI929108, AW151714, AW088903, AI689420, AL079794, AI922550, AL036638, AI345416, AL036214, AI345612, AL041150, AW059713, AW029263, AI927755, AI079963, AI863191, AI537261, AI620284, AI241923, AI863321, AI677824, AI445992, AI872064, AI445990, AI345415, AI624293, AA983883, AL036673, AI045163, AI521005, AI434741, AI539028, AI866770, AI696626, AI433157, AI817523, AI702073, AW088899, AI612750, AI251221, AI036772, AI554343, AI036396, AW162071, AI039086, AI036403, AA908294, AW089275, AA911767, AI120853, AI623941, AI500061, AI874151, AW051088, AI890907, AW087901, AI538764, AA641818, AI633125, AI696819, AI698391, AI539153, AW087462, AI538564, AI801325, AI915291, AW152182, AI355779, AI312399, AW020095, AI582932, AI872423, AI284517, AI923989, AI500706, AI364788, AI611743, AI783504, AI868931, AW149925, AI521560, AI89189, AI500662, AI345396, AI345745, AI888621, AI473536, AI589993, AI86469, AI502794, AI119457, AI046595, AI888661, AI873644, AI280670, AW073697, AA807088, AIW079572, AI590686, AI859991, AI884318, AI587606, AI783861, AI468872, AI923357, AI336575, AI280661, AI569328, AW238688, AI349964, AW088793, AW193203, AI567360, AI491805, AI680498, AI537617, AI919345, AI922577, AW130863, AW129230, AI698401, AI471361, AW081255, AA830821, AI860003, W74529, AL119399, AI251830, AW081231, AI648567, AA693347, AW149876, AI805638, AI366549, AI799195, AI866082, AI636719, AI470293, AW023859, AA579618, AI620993, AI539771, R40432, AI566630, AI573026, AI866510, AW162189, AI866608, AW022699, AI636619, AI349645, AI805688, AI038565, AW087938, AI249877, AW083804, AI35426, AI348777, AW191959, AI343059, AA848053, AI048323, AI365256, AI367720, AI345347, AL045903, AI434453, AL037582, AI624529, AI345677, AW08576, AI886415, AL037602, AW265004, AI048340, W45035, AI349933, AI038564, W46547, AI677797, AI345608, AW162194, AI683492, AW238730, AI348897, AI857724, N98606, AI251205, AL037558, AW191844, AI765469, AL037030, AI249946, AI961589, AC006197, AI031984, AC004987, AC00612, Z98949, I48978, AI133665, Z72491, I48979, AF185576, AI117460, I89947, A08913, AC006039, AL137533, AL080124, A08916, AF026816, AC009501, AL008637, Y11587, A08910, A08909, I42402, I09499, AC004554, U95114, AR038854, A08912, AL110280, I89931, A65341, AL050172, AF090901, AF106862, AI133104, I49625, AC007172, A08908, AL049382, AF065135, E06743, AF139986,</p> |
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| | | | | AI003102, AW193553, AW051049, AW263449, AW338767, AA194855, R17015, AI187752, AA299747, D56913, N83414, AI074015, W95598, R43379, AI372469, AA372620, AI915250, C14909, AL040146, C15727, AA911490, AI972644, AW193598, AI271716, AF131738, and AL022240. |
| HBUAG44 | 9353 | 716685 | 1 - 336 | 15 - 350 AL134194, and AA211828. |
| HBUAC23 | 9354 | 847698 | 1 - 342 | 15 - 356 H65948, and AA522538. |
| HBTAE84 | 9355 | 781946 | 1 - 387 | 15 - 401 |
| HBMXU73 | 9356 | 953898 | 1 - 687 | 15 - 701 AI912940, AI356880, AA768753, R38430, AW026385, AI094990, AA417714, AI521674, AI911847, H17932, AA603061, AA152297, AI469372, AI038106, R65634, N71126, AA602303, N47801, AI445560, H10196, AI566092, AA131931, N39095, N57531, AI537013, AI951484, AI972988, AI141578, N34391, AI867900, AA830221, AA058539, AW057639, AI703292, AI866150, AI393673, AI307808, AI129217, H11742, Z39045, T24056, F01755, F03814, R36084, AI471051, RS1266, R42298, H07915, AA412728, F01735, AW170333, and C01600. |
| HBMXS23 | 9357 | 675254 | 1 - 442 | 15 - 456 T56858, H47055, AI097490, T48207, H47127, R06541, T48206, and AC000393. |
| HBMXL78 | 9358 | 738763 | 1 - 451 | 15 - 465 AA040902, W79933, AI818085, AI831014, AI819405, AI814284, AI570554, AW005883, N92092, AI373828, AA365266, AA705064, AI073849, AA150396, AW081533, N31954, AI078328, F19605, AA688147, N44237, AI814155, AA385643, W78108, AA934651, AA661822, AA448574, AI669184, AA719546, AA594574, W02992, AA035203, W46177, AI304898, AI042436, AI702857, AW300688, W46540, AA724939, N24291, AA862274, H47300, AA989294, H21424, AA935840, AI968456, R44002, W87615, AA302189, R32790, AI468314, H59434, AA156578, R94915, AI868335, AW277188, N69447, N34605, AA903411, AI754560, AA441863, AA449263, AI17548, and AF064084. |
| HBMXL41 | 9359 | 711608 | 1 - 452 | 15 - 466 R99651. |
| HBMXJ70 | 9360 | 757328 | 1 - 443 | 15 - 457 H64110. |
| HBMXG10 | 9361 | 968055 | 1 - 362 | 15 - 376 R13146, and AC006960. |
| HBMXF73 | 9362 | 764551 | 1 - 463 | 15 - 477 H71766, and AL050032. |
| HBMWX13 | 9363 | 955208 | 1 - 435 | 15 - 449 AI690702. |
| HBMWS75 | 9364 | 767440 | 1 - 425 | 15 - 439 R00589, and Z84467. |
| HBMWR62 | 9365 | 754059 | 1 - 466 | 15 - 480 AI179886, AI124981, R68627, and AL079296. |
| HBMWK06 | 9366 | 936088 | 1 - 236 | 15 - 250 AA608586, and AI863209. |
| HBMW128 | 9367 | 685443 | 1 - 375 | 15 - 389 R11487, AA668261, R12375, and AA905206. |
| HBMWE35 | 9368 | 706034 | 1 - 645 | 15 - 659 AA001457, AA015999, and AF062922. |
| HBMVQ26 | 9369 | 546495 | 1 - 290 | 15 - 304 |
| HBMVO41 | 9370 | 712565 | 1 - 440 | 15 - 454 R60294, and AC005007. |
| HBMVI33 | 9371 | 702683 | 1 - 405 | 15 - 419 R18185. |
| HBMVG85 | 9372 | 575418 | 1 - 208 | 15 - 222 H08588, AW452797, R61253, AI460322, AI039491, AA416798, AA609458, AI1867411, AI631600, |

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| HBMVG18 | 9373 | 666855 | 1 - 571 | 15 - 585 | AD206856, AI015080, AW004016, AI880436, Z41596, AI928117, and AA774212. |
| HBMVE59 | 9374 | 933208 | 1 - 409 | 15 - 423 | N80648, H82296, H95468, T96215, and AI630703. |
| HBMVD05 | 9375 | 932441 | 1 - 343 | 15 - 357 | H77697, H77689, H77703, H69186, and AF165138. |
| HBMUW96 | 9376 | 574517 | 1 - 296 | 15 - 310 | T73358, and AC006947. |
| HBMUW85 | 9377 | 783416 | 1 - 612 | 15 - 626 | AL078644, and AC011311. |
| HBMUW58 | 9378 | 574513 | 1 - 202 | 15 - 216 | R51759, AA035757, AA159960, and AF110908. |
| HBMUN03 | 9379 | 847787 | 1 - 478 | 15 - 492 | AC007539, and AC006560. |
| HBMUL31 | 9380 | 456760 | 1 - 549 | 15 - 563 | AA824413. |
| HBMUG59 | 9381 | 739509 | 1 - 497 | 15 - 511 | AA429725, and AA281396. |
| HBMUG23 | 9382 | 425961 | 1 - 605 | 15 - 619 | |
| HBMUD91 | 9383 | 789320 | 1 - 589 | 15 - 603 | T84888, AA960882, AF051976, and AF144094. |
| HBMUB13 | 9384 | 950984 | 1 - 555 | 15 - 569 | V01309, AA577113, AW292823, D20298, AI240027, F17130, T30300, AA744372, H75572, AW204120, and AA433861. |
| HBMUTX71 | 9385 | 760605 | 1 - 420 | 15 - 434 | H59274. |
| HBMUTS23 | 9386 | 676310 | 1 - 385 | 15 - 399 | R25927, Z45765, and AL008726. |
| HBMTR29 | 9387 | 847785 | 1 - 509 | 15 - 523 | AA573319, AA634778, H56345, T92363, H56344, T92415, and A90848. |
| HBMTM67 | 9388 | 751907 | 1 - 305 | 15 - 319 | R24667, AI741100, AI689414, C14069, and AL031681. |
| HBMTD69 | 9389 | 754179 | 1 - 469 | 15 - 483 | R34775, and AI150382. |
| HBMTB85 | 9390 | 923730 | 1 - 432 | 15 - 446 | W21033, AI924201, AA766826, AA888820, AI814342, AW001123, AW134874, AI366738, AA670436, AI935359, H42655, AI198343, AA665651, H42654, AF077740, Z97630, and AF093403. |
| HBMTB34 | 9391 | 706024 | 1 - 460 | 15 - 474 | |
| HBMSX83 | 9392 | 863883 | 1 - 493 | 15 - 507 | W86935, W86925, and U95626. |
| HBMDS02 | 9393 | 920096 | 1 - 429 | 15 - 443 | AA256753. |
| HBMDN16 | 9394 | 661947 | 1 - 493 | 15 - 507 | AA626212, and Z63877. |
| HBMDM25 | 9395 | 678127 | 1 - 586 | 15 - 600 | H00140, and AA284312. |
| HBMDL27 | 9396 | 683427 | 1 - 487 | 15 - 501 | N52474. |
| HBMDF52 | 9397 | 727169 | 1 - 535 | 15 - 549 | T63944. |
| HBMDD72 | 9398 | 879813 | 1 - 407 | 15 - 421 | D58283, D80268, AW178893, D51022, C04682, D80212, D80188, D80064, CI4014, CI14389, H67854, AA809122, F13647, D59653, D51759, H67866, C15076, D80195, D80439, D58246, D81030, D51423, D80251, D57483, T11417, C03092, D80258, D80157, D81026, D59859, D80269, D80022, C14331, D80014, D80166, D80366, AA305578, D59889, C14973, D80196, D59467, D59619, D80133, D80247, C14227, D80210, D51799, D59503, D80391, D80164, D59275, D80248, D80240, D80045, D80053, D80038, D50979, D80219, C06015, D80043, D59787, D80227, D59502, D50995, AA305409, AW375406, D59474, D59610, D51221, D81111, |

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| | | D59551, D59317, D80522, D51103, D5927, AW179332, AW360811, D80024, C14046, AI535686, D80193, D58101, D80302, C05763, AA514186, AA514188, AW178906, AI525912, AW369651, D45260, AI525242, AI55774, AI525235, AI557751, AI525920, AI525917, AA514184, AI535959, AI525215, AI525227, AI525923, AI525237, AI525925, T11191, L81613, A87015, AR008278, A84916, AB002449, A62300, A62298, I14842, AB028859, A82595, AR054175, AR060385, AJ132110, AR008277, AR008281, AR018138, AF058696, X68127, X67155, D88547, AR016691, AR016690, and U46128. |
| HBMCT30 | 9399 | 692733 1 - 516 |
| HBMCT24 | 9400 | 677209 1 - 338 |
| HBMCT09 | 9401 | 625627 1 - 653 |
| HBMCS92 | 9402 | 792736 1 - 425 |
| HBMCS55 | 9403 | 731802 1 - 597 |
| HBMCR25 | 9404 | 678164 1 - 988 |
| HBMCCQ95 | 9405 | 8888393 1 - 359 |
| HBMCG84 | 9406 | 783043 1 - 407 |
| HBMCF20 | 9407 | 646279 1 - 595 |
| HBMCB55 | 9408 | 731800 1 - 359 |
| HBMBX72 | 9409 | 911168 1 - 887 |
| | | 15 - 530 W38346. |
| | | 15 - 352 |
| | | 15 - 667 R78567, R22348, AI138749, AI432160, and AI378357. |
| | | 15 - 439 T89785. |
| | | 15 - 611 AA252232, H30735, H30819, and AF085888. |
| | | 15 - 1002 AA766345, AA258762, AA258882, and R873885. |
| | | 15 - 373 |
| | | 15 - 421 T80409. |
| | | 15 - 609 AA160470, AA594945, AL047220, and Z98884. |
| | | 15 - 373 R09103. |
| | | 15 - 901 AA077388, AI043009, AF039185, AW243793, AA974503, AL079869, AI044339, AA078338, AL079812, AI567674, AW008212, AI499938, AL039996, AI732120, AA908687, AW102955, AI679782, AI582769, AL041706, AA563818, AA255853, AW406162, AA287570, AA680243, AL044340, AA884598, T74524, AI356440, AI110760, AL121235, AA578590, AL038842, AI799642, AW089016, AA349366, AA806796, AI635279, AI434695, AI917156, AA643434, AI053790, AW302711, D82290, AI144081, AI313166, AW276586, AI708009, C06151, AW301906, AW342042, AL044940, AL048925, AW302753, AC004878, AC005081, AC004895, AC010205, AC004134, AC003682, AC005488, AC002350, AL023553, AC006057, AL022165, AC008101, AF053356, AC003104, AL080243, AL121653, AC005783, L78810, AC005015, AL139054, AC008079, AL133448, AC005088, AC005399, AL034423, AP000557, AF001549, AC007731, AL049869, AC007371, U85195, AF196779, AC004882, AC004814, AC005520, AL022322, Z99716, AC002563, AL121603, AE000658, AC000025, AL050318, AC004883, AL022238, AL022721, AL096712, U95740, AC007055, AF134726, AC004796, AC004815, AC004217, AC006130, AC005940, AC005531, AC006511, AC006014, AC006571, AL096791, AC007919, AC007227, Z97630, AC004000, AP000350, AL049712, Z84487, AC007066, AC002404, AF088219, AL050307, AC009247, AC006285, AC002115, AL008582, AC000026, AC003007, AC004019, AC004832, AL035458, AL135744, AF165926, D87675, AL080242, AC005500, AC004542, Z98051, AL021154, AC002543, AC002303, AL022323, AP000690, Z93241, AC005606, AC005067, AC007324, AC004033, U80017, AC004638, AF11168, AL049776, AC006006, AP000045, AC006111, AL022311, AC000338, AC006251, |

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| | | | | T86779, W72654, T86785, AI356251, AW134759, AA761197, T32285, R52494, C00788, AA983316, AI797525, AW135739, AA213524, W49846, AA938126, W76616, AI419595, T86686, AA635708, AI962906, T20097, T30685, H59977, AA565271, AI088829, AW418557, U83525, AA481982, AA482087, AA864361, and Z222819. |
| HBMBF78 | 9416 | 623421 | 1 - 950 | 15 - 964 |
| HBMBE68 | 9417 | 879588 | 1 - 388 | 15 - 402 |
| HBMBBC66 | 9418 | 859500 | 1 - 339 | 15 - 353 |
| HBMBBB57 | 9419 | 734915 | 1 - 324 | 15 - 338 |

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| | | | | AC006318, AL033376, AC005694, AP001052, AC005696, D84394, AC005086, AL022165, AC004841, AC004647, AL049780, AC005207, AC007050, AC007041, AC003664, AE000658, AC004929, AC003663, Z98884, AL024509, AC004967, AC005740, D87675, D28126, U91326, AL023280, AC006084, and AC001231. |
| HMBB45 | 9420 | 578817 | 1 - 343 | 15 - 357 |
| HBMAC54 | 9421 | 930481 | 1 - 421 | 15 - 435 |
| HBINCO1 | 9422 | 915970 | 1 - 352 | 15 - 366 |
| HBINB52 | 9423 | 726475 | 1 - 484 | 15 - 498 |
| HBJMW95 | 9424 | 797604 | 1 - 805 | 15 - 819 |
| HBJMW03 | 9425 | 921996 | 1 - 951 | 15 - 965 |
| HBJMU53 | 9426 | 727987 | 1 - 458 | 15 - 472 |
| HBIMS40 | 9427 | 710880 | 1 - 371 | 15 - 385 |
| HBIMR59 | 9428 | 738615 | 1 - 622 | 15 - 636 |
| HBJML90 | 9429 | 787320 | 1 - 433 | 15 - 447 |
| HBJML80 | 9430 | 775435 | 1 - 451 | 15 - 465 |
| HBJME11 | 9431 | 972939 | 1 - 457 | 15 - 471 |
| HBJMC69 | 9432 | 754875 | 1 - 290 | 15 - 304 |
| HBJMA80 | 9433 | 777456 | 1 - 425 | 15 - 439 |
| HBJLX09 | 9434 | 625319 | 1 - 428 | 15 - 442 |
| HBJLW74 | 9435 | 765352 | 1 - 398 | 15 - 412 |
| HBJLU36 | 9436 | 847851 | 1 - 426 | 15 - 440 |
| HBJLR37 | 9437 | 849633 | 1 - 416 | 15 - 430 |
| HBJLR31 | 9438 | 900883 | 1 - 1440 | 15 - 1454 |

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| HBJJE44 | 9456 | 716409 | 1 - 564 | 15 - 578 | AI142126, R54554, H24334, AI142097, and AW374108. |
| HBJJIA32 | 9457 | 699059 | 1 - 695 | 15 - 709 | AI1820773, H30102, H39985, H21775, AI668592, AI821454, R49787, H28487, and AC007200. |
| HBJJIA01 | 9458 | 916078 | 1 - 1042 | 15 - 1056 | AI088489, AA194062, AI123551, AA759303, AW028108, AI093432, AA836264, AA767044, AI274044, AI434773, AW135037, AI808043, AA806714, AW087576, AA883729, AA809688, AA847203, AI524547, AA865016, and AC004982. |
| HBJIL42 | 9459 | 597100 | 1 - 399 | 15 - 413 | R35568. |
| HBJIL36 | 9460 | 861363 | 1 - 776 | 15 - 790 | AI091292, AI005391, AA806165, AI02979, AI702990, AA158537, N54188, AA069178, AA091807, AA095638, and AC006146. |
| HBJIH60 | 9461 | 930448 | 1 - 517 | 15 - 531 | AA729724, and AC006116. |
| HBJJF51 | 9462 | 725081 | 1 - 449 | 15 - 463 | H69862. |
| HBJJF31 | 9463 | 697753 | 1 - 673 | 15 - 687 | T79551, T86369, R98540, and T98454. |
| HBJIB69 | 9464 | 754891 | 1 - 531 | 15 - 545 | H69017, and H69779. |
| HBJIA80 | 9465 | 784267 | 1 - 625 | 15 - 639 | AA147107, AA425502, R79257, H03146, W58353, C19029, AA657402, AI050680, AA757308, AI963898, AA953652, AA369798, AI393329, U48339, T85056, and AA443785. |
| HBJHX73 | 9466 | 971377 | 1 - 1045 | 15 - 1059 | AI148152, D51250, D80253, D80043, AW242597, D59787, D80219, D59275, D80240, D80210, D51423, D80134, D59619, D80193, D80391, AL039085, D80196, C14227, D80949, T23947, D59927, AL039538, AL039564, AL039156, AL043441, AL039150, AL038821, AL043445, AL039509, D80366, AL039108, T24119, AL039678, AL039074, AL038837, AL039625, AL039648, AL039629, D80168, T24112, AL037726, AL038531, AL039566, AL039109, AL040992, AL039924, AL039128, AL044407, AL039659, AL036973, AL039386, AL045337, AL037051, AL045353, AL036725, AL039423, AL045794, AL045341, AL039410, AL042909, AI535983, H00069, AI038025, AL044530, AL043422, T11051, D81026, AL043423, D80045, D50995, C14014, C75259, R47228, AL036418, AI535783, AW013814, AW452756, D59889, AW451070, C15076, AL037526, AL037639, D80022, D80195, AL036196, D80038, AL037615, AL038851, AL037082, T23659, D81030, D58283, T11417, T02921, D80188, D51799, D80378, D59467, AI036924, F13647, AL036117, AI557751, AL036767, T03269, AL036679, AI037601, AL036238, D80522, D80212, D50979, AL036190, AL036733, C14298, T48598, AI036964, Z21582, D59502, AA285331, C14429, D80164, AA514190, D59695, AL036158, D80166, AL037027, D59859, D80269, D80268, AL037054, AL037178, D52291, Z25782, D58253, AI036191, D80024, AL036765, AL036227, D57483, Z99396, D59610, C14389, D59627, D80241, D81111, AL036998, AI910186, AL037177, C14331, AL036207, D51060, H00072, AA305409, AI037021, AW178893, AL036174, D51079, AL037047, AW450376, AW177440, AL036139, D51022, AW179328, AL036167, D80014, AW178775, AA305578, AW378532, AL036132, D51213, AW352158, AW377671, AI905856, AW369651, D80251, D80064, D51097, AA514188, D80248, AW178762, AL037077, AW177501, AW177511, AL037002, AW360834, AI557774, AA514186, D80133, AW360811, T02974, D80302, AW352117, C05695, C14407, AW176467, AW375405, AW378340, Z225783, AW366296, D80132, AW360844, AW360817, AW375406, |

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| HBJHW74 9467 765380 1 - 435 15 - 449 | AA716676, H63334, H60316, A1744524, AA836358, Z95116, AC005529, U91321, AC004832, AL034429, AL049874, AC005796, AC005527, AL049539, AL109758, and AL132777. |
| HBJHU20 9468 907575 1 - 544 15 - 558 | AA179630, and AA176615. |
| HBJHO44 9469 882040 1 - 409 15 - 423 R96772. | |
| HBJHI96 9470 828996 1 - 424 15 - 438 | AA461038, AW151827, A1753072, A042290, AI377120, AI364168, W68727, N30339, AI754813, AI203980, AA921913, AI754315, AW162458, AI076713, AI281214, AI457783, AW080473, AW338260, AW291880, AW337350, A1913188, A1243887, AA291380, H73392, AA702481, AW338260, AW291880, AW337350, A1913188, A1243887, AA291380, H73392. |

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| | | | | AI095058, AI439501, AW026886, AI831262, AI961995, T54990, AA578659, AW058379, A1921073, H58220, AA055896, T56868, AW073087, AA403311, R94192, AA410982, AI566606, T54669, AI814941, AA680075, AA852300, AA131298, AI686560, AA600068, AI380408, AI694164, AA338172, AA853557, AA304609, AA332521, R94291, AA131543, AW198197, W68749, N56676, AA377810, H58556, AA055184, W58726, AA570322, AA347235, R75738, AA419374, W51998, W52829, AI280595, AA366339, AI537499, AA347234, and AA253337. |
| HBJHG02 | 9471 | 919450 | 1 - 643 | 15 - 657 |
| HBJGT03 | 9472 | 9233800 | 1 - 497 | 15 - 511 |
| HBJFR45 | 9473 | 722105 | 1 - 519 | 15 - 533 |
| HBJFQ08 | 9474 | 959190 | 1 - 326 | 15 - 340 |
| HBJFP52 | 9475 | 728380 | 1 - 471 | 15 - 485 |
| HBJFP08 | 9476 | 959868 | 1 - 474 | 15 - 488 |
| HBJFK85 | 9477 | 783432 | 1 - 292 | 15 - 306 |
| HBJFI48 | 9478 | 847899 | 1 - 489 | 15 - 503 |
| HBJFH30 | 9479 | 691056 | 1 - 440 | 15 - 454 |
| HBJFH60 | 9480 | 740543 | 1 - 552 | 15 - 566 |
| HBJFH06 | 9481 | 935587 | 1 - 675 | 15 - 689 |
| HBJFD41 | 9482 | 711591 | 1 - 638 | 15 - 652 |
| HBJFD21 | 9483 | 671205 | 1 - 869 | 15 - 883 |
| HBJFC23 | 9484 | 423885 | 1 - 616 | 15 - 630 |
| HBJFB10 | 9485 | 968162 | 1 - 421 | 15 - 435 |
| HBJEY89 | 9486 | 787044 | 1 - 309 | 15 - 323 |
| HBJES09 | 9487 | 487020 | 1 - 547 | 15 - 561 |
| HBJEP70 | 9488 | 757374 | 1 - 476 | 15 - 490 |
| HBJEN68 | 9489 | 752251 | 1 - 594 | 15 - 608 |
| HBJEM45 | 9490 | 722107 | 1 - 306 | 15 - 320 |
| HBJEL04 | 9491 | 615515 | 1 - 480 | 15 - 494 |
| HBJEJ06 | 9492 | 935967 | 1 - 385 | 15 - 399 |
| HBJEE72 | 9493 | 766187 | 1 - 516 | 15 - 530 |
| HBJED51 | 9494 | 485130 | 1 - 485 | 15 - 499 |
| HBJED05 | 9495 | 935058 | 1 - 459 | 15 - 473 |

| | | | | | |
|---------|------|--------|---------|----------|--|
| HBIEC67 | 9496 | 573809 | 1 - 424 | 15 - 438 | |
| HBIEA73 | 9497 | 573834 | 1 - 105 | 15 - 119 | |
| HBIEA54 | 9498 | 625943 | 1 - 507 | 15 - 521 | |
| HBIEA38 | 9499 | 577103 | 1 - 598 | 15 - 612 | W85789, AA693974, AI032087, and W85723. |
| HBIEA37 | 9500 | 839964 | 1 - 96 | 15 - 110 | |
| HBIEA13 | 9501 | 419107 | 1 - 255 | 15 - 269 | |
| HBJDZ49 | 9502 | 847928 | 1 - 383 | 15 - 397 | AI018729, AI017735, T94096, AA788760, AC004878, AC006014, AC005488, AC005071, AC006480, AF030453, and AC005088. |
| HBJDR24 | 9503 | 677407 | 1 - 415 | 15 - 429 | R96956. |
| HBJDQ86 | 9504 | 784654 | 1 - 422 | 15 - 436 | N92225. |
| HBJDM70 | 9505 | 757435 | 1 - 386 | 15 - 400 | H02200. |
| HBIDL24 | 9506 | 678272 | 1 - 624 | 15 - 638 | R92654, R92648, and N59587. |
| HBJCV85 | 9507 | 900955 | 1 - 807 | 15 - 821 | D58283, D80195, D80227, D80391, D80166, D59859, D80043, D59502, D51423, D59619, D80210, D51799, D80240, D80253, D80196, D80269, D80038, D80188, D80212, D59275, D80193, D57483, D59927, D80219, D81030, D80022, D50979, D59889, D59610, D80366, D80378, D80045, D59787, C14429, D50995, D80164, D81026, D80241, D80024, T03269, C15076, C14389, C75259, C14014, C14331, D59467, D51060, AW178893, AA305409, D80134, F13647, D51250, D80268, D58253, D80949, AA305578, D80168, C14227, D51079, D81111, D51022, AW177440, AW179328, D80522, D52291, AW178775, AW378532, D59695, AW352158, AW377671, Z21582, AI910186, AW369651, AI905856, D80251, AA514188, D80248, AW178762, AA514186, D51097, AA285331, C05695, C14298, AW177501, AW177511, D80064, D80133, AW360811, C14407, AW352117, AW176467, AW378540, AW375405, AW360834, D80132, AW366296, AW360844, AW360817, AW375406, AW378534, AW179332, AW377672, AW179023, AW178905, AW179220, D80302, AI557751, AW352171, D80439, AW377676, AW178906, AW352170, AW177731, AW178907, AW179019, AW179024, D59373, D80247, D80014, AW177505, AW179020, AW360841, AW178909, AW177456, AW179329, AW178980, AW177733, AW378528, AW178908, AW178754, AW179018, AW352174, T11417, D51103, T03116, AW179004, AW179012, AW178914, AW378525, D80157, AW367967, AW177722, AW177728, T02974, D51759, AW179009, AW178774, AW178911, AW378543, AW352163, D58246, C06015, D59503, D80258, AW178983, AW352120, AW178781, T48593, D51213, AW378539, D59627, AI557774, D58101, AI535850, AA809122, AW177723, D59653, AW177508, D45260, C14975, AI525923, AW378533, AW367950, H67866, D59317, H67854, C03092, D45273, AW177497, AI535686, AW178986, N66429, AW177734, A1525917, C14973, C14344, D59474, A1525227, D51221, D59551, D60010, AA033512, A1525920, A514184, D60214, C14957, C14046, C16955, T03048, A1525242, A1525235, A1525912, A1525925, A1535961, AW378542, A1525215, C05763, Z33452, A1525237, A1525222, D31458, AJ132110, A62300, A84916, A62298, X67155, A67220, D89785, A78862, D26022, A25909, Y17188, |

| | | | | | | |
|----------|------|--------|----------|---|--|--|
| | | | | AR018138, D34614, D88547, AR025207, X82626, AB028859, AF058696, AR008278, I82448, X68127, AB012117, Y12724, A85396, AR066482, A44171, A85477, I19525, A86792, U87250, X93549, A82595, AR060385, A94995, AB002449, AR016808, AR008443, I50126, I50132, I50128, I50133, AF135125, AR066488, AR016514, AR060138, A45456, A26615, AR052274, Y09669, A43192, A43190, AR038669, AR066490, AR066487, I14842, A30438, I18367, D88507, AR054175, D50010, Y17187, AR064240, AB033111, A63261, AR008277, AR008281, AR008408, AR062872, A70867, AR016691, AR016690, U46128, I79511, D13509, A64136, A68321, AR060133, U87247, Z32749, AB023656, U79457, AF123263, Z82022, AR032065, AR060382, X93535, and AR008382. | | |
| HBJCQ65 | 9508 | 876430 | 1 - 1780 | 15 - 1794 | AI828112, AI762456, AI669527, AW270041, AW005454, AI742020, AI813489, AW055057, AW438593, AA702328, AI379307, AA262137, AA643040, AA694381, AA281632, AW243902, AI422791, AA493261, AW117912, AI034474, AW236597, AW440103, AI292303, AA281692, D19612, AA768827, N99706, AI081788, AI868989, AA514538, AA877024, N71978, R24110, AW449526, R17044, AW082476, AA369546, R24059, AI290151, R26499, AI3833270, AA612994, AW082653, R50985, C16425, R26471, AI701667, D62032, AA262413, AA333518, AW082649, AA722211, A1539327, AA369545, AW021723, R17005, AA468881, AA522467, AI371310, N93082, and W24736. | |
| HBJCJ82 | 9509 | 779645 | 1 - 467 | 15 - 481 | | |
| HBJCE07 | 9510 | 954090 | 1 - 180 | 15 - 194 | R02678. | |
| HBJCB83 | 9511 | 781411 | 1 - 617 | 15 - 631 | T88832. | |
| HBJBR04 | 9512 | 847952 | 1 - 432 | 15 - 446 | AW206286, AW291675, AW025778, T99524, AW026757, and AC005682. | |
| HBJAP95 | 9513 | 796659 | 1 - 263 | 15 - 277 | N89814, AA209448, AW239298, AP000541, and AI239321. | |
| HBJAO55 | 9514 | 732436 | 1 - 414 | 15 - 428 | T81741, AA778192, W85729, and AI132777. | |
| HBJAJ49 | 9515 | 723164 | 1 - 427 | 15 - 441 | N71474. | |
| HBJAI50 | 9516 | 724619 | 1 - 490 | 15 - 504 | AI089358, AA056686, AI089564, AI669927, AI817821, AA056582, AA847148, AI827763, and AB002370. | |
| HBJAH27 | 9517 | 682941 | 1 - 239 | 15 - 253 | | |
| HBJAE32 | 9518 | 699695 | 1 - 395 | 15 - 409 | W888646, AI368895, and Z39215. | |
| HBJIAB77 | 9519 | 772422 | 1 - 491 | 15 - 505 | H53026. | |
| HBIAB49 | 9520 | 722195 | 1 - 874 | 15 - 888 | AI479236, AI935423, AA255972, and AA243356. | |
| HBIAB28 | 9521 | 847966 | 1 - 486 | 15 - 500 | Z28561. | |
| HBIAB15 | 9522 | 660552 | 1 - 395 | 15 - 409 | AA429379. | |
| HBDAE47 | 9523 | 720008 | 1 - 572 | 15 - 586 | AA252703, AI760942, and AA565583. | |
| HBDAD64 | 9524 | 864344 | 1 - 534 | 15 - 548 | H04563, R80434, AA531428, Z82215, and Z95114. | |
| HBDAD16 | 9525 | 661560 | 1 - 375 | 15 - 389 | AI810593, and T89570. | |
| HBCCO10 | 9526 | 963157 | 1 - 564 | 15 - 578 | AA701314, and AA004793. | |

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|---------|------|--------|---------|-----------|---|
| HBCCJ05 | 9527 | 930956 | 1 - 568 | 15 - 582 | H59931, H67432, Z70280, AC003100, AC006998, AC003072, AC005154, AL022154, and AC003034. |
| HBCCE11 | 9528 | 965869 | 1 - 579 | 15 - 593 | AI672457, AA810483, AI269914, AI949892, AI198001, W86511, AW237699, AI863804, and AI525426. |
| HBCCD06 | 9529 | 938319 | 1 - 590 | 15 - 604 | AI078128, AI871101, AI274339, AA035467, AA419038, AI479404, AI677732, AW190726, AI198435, AA031617, AI283200, AI983969, AA411122, AI093316, AI361637, AI769275, AI560217, AA961077, AI291805, AI291474, AA915909, AA035466, AA046943, AI857306, AA661657, AA427407, AA725194, AA423792, AW070742, AW051192, AI275083, AW293787, AW452102, AA250784, AA031475, N92812, H91759, AW149476, H91665, and AA514348. |
| HBCCB51 | 9530 | 975256 | 1 - 515 | 15 - 529 | |
| HBCBR08 | 9531 | 958151 | 1 - 567 | 15 - 581 | AA280776, AL137689, AF111173, and AF100172. |
| HBCBN51 | 9532 | 952057 | 1 - 995 | 15 - 1009 | AA464030, AA434281, AA410674, D78694, AI860751, AI628190, AA568168, AI097605, AI199027, D78920, AA227411, AI200649, AI199599, AI935345, AA525327, AI475176, AI910441, AI923458, AI247190, AI687257, AI923451, AI541551, AI699991, AI653151, and AW438934. |
| HBCBN06 | 9533 | 934110 | 1 - 525 | 15 - 539 | H40594. |
| HBCBG04 | 9534 | 926761 | 1 - 588 | 15 - 602 | AA677024, and AI022041. |
| HBCBF12 | 9535 | 969578 | 1 - 517 | 15 - 531 | AI566483, AA417101, and AI021368. |
| HBCBE57 | 9536 | 848322 | 1 - 758 | 15 - 772 | AA486018, AA005417, H56995, AL031666, and AF144233. |
| HBCBB22 | 9537 | 848325 | 1 - 895 | 15 - 909 | AA419501, AA969163, AA157911, AA410996, AW452982, AW339854, and H14554. |
| HBCAW52 | 9538 | 573919 | 1 - 349 | 15 - 363 | AA826669, AA287363, AI809776, AA470582, AA516190, AA505108, AA838091, AI680323, AA947361, Z97054, AL049694, AC005484, AC004253, AC005288, AC004019, AL049757, AC004584, AC006441, AC009247, AC007395, AC004895, AL022316, U91318, U95742, AI049766, AL009181, AL023553, AC016830, AC002350, AC007216, AC000052, Z85986, AC007676, AC005562, AC016027, AC005822, AL031848, AL050318, AL031662, AC006088, AC003950, AC005086, AC004099, AB001523, AP000694, AC004841, AC010205, AC004765, AC005280, AC004813, AL109984, AC005409, AC003101, AC004678, AC004812, AP000514, AL034429, AC004874, AL031602, AC006487, AJ009610, AC004596, AL136295, AC002314, AC007227, AL117694, AP001060, AC004125, AL031587, AL133246, AC005057, AF001548, AP000512, AC005004, AC005088, Z83844, AL031311, U91323, AC007686, AF001549, AL022165, AF030453, Z98941, Z84469, AC004383, AC005914, Z93016, AC005516, AI049569, AC006059, Z93017, Z83847, AC005837, AC004913, AF217403, AC005015, AC004662, AC005081, AC007193, AC008039, AC003982, AC005058, AC006130, M89651, AC008372, AF043945, AC005696, AL096701, AL024474, AC002312, AL031276, AC004531, AI009183, AI049776, AL049780, AC005821, AC003046, AF134726, AL096712, AL031985, AI049758, AL035249, AL023807, AP000501, Z93241, AL133382, AC005940, AC010077, AC008101, AL035086, AC006430, AC002425, Z86090, AC005082, AC007899, AC005049, |

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|---------|------|--------|----------|---|
| | | | | AC005913, AP000692, AC004912, AC005747, AL035422, Z95116, AL035461, AC007543, Z84469, AP000172, Z93017, AF069291, AL035685, AC003910, AC004910, AC000039, AP000057, AC006254, AC004966, AC004890, AC005215, AC003956, AP000552, AP000125, AC005277, AC006211, AC004217, AL022332, Z98044, Z83846, AC005480, AC003037, Z94161, AP000701, AP000272, AC005207, AL096791, AP000695, U34879, AC004832, Z84487, AC005216, AC003004, AF008191, AF049895, AC006130, AC002395, AL109839, AC003963, AL035420, AL022726, AF035453, AC006561, L78810, AL078634, AC002425, AF035968, AC006581, U91318, AC005233, AL031387, AC004849, AC006552, Z85997, AD000092, AC005539, AL121653, AL049872, AD000813, AC004834, Z97630, Z81010, AC007406, AC004922, AC002477, AC006251, AL023876, AC006596, U51561, AC007160, AC005049, Z82244, AP000210, AP000132, AC002091, AL035681, AL109865, AC005924, AC005225, AC004891, AC004752, AC003029, AF002993, AL031257, AC007421, AC004636, AC007899, AL035690, AC006160, Z99127, AC006141, AL009051, AP000556, AF001548, AC004638, AC005048, AC007773, AC005335, AL049743, AC004263, Z93023, AC004997, U85195, AC005632, AC004988, AC009946, AL096701, AC009516, AC005082, AL049699, AC004151, AC006443, AC007842, AL049745, AC005089, AC003077, AP000114, AP000046, AC005383, and AC002044. |
| HASCG58 | 9543 | 738423 | 1 - 489 | 15 - 503 |
| HASAW90 | 9544 | 789112 | 1 - 822 | 15 - 836 |
| HASAR74 | 9545 | 879377 | 1 - 1185 | 15 - 1199 |
| | | | | N42137, AA416659, AI587031, R18649, AA416660, D78802, AW182288, and N33742. AW302315, AA644090, AI962030, AA601356, AI040051, AI345721, AA4832606, AL040054, AA568204, AA570740, AA584489, AW188742, AA581263, AA714011, AA749235, AI061313, AA687730, AA503298, AA838190, AI251576, AW021917, AA862243, AA640305, AA626040, AI499954, AA347114, AI135357, AA584482, AI207424, AI583466, AA121777, AA182731, D87008, D88268, AC007382, AL031177, AL008719, AL079304, AC005274, AC004615, Z96074, AC008082, AC005406, AL023283, U95743, AL117329, AC005071, AL035405, AC004866, AC002449, AL136297, AC004097, AC005010, AC005744, Z98304, AL049839, AC005829, AC000403, AC004672, AC005231, AL020997, AC000038, M89651, AC006454, AC005280, Z85996, AL035697, AC012627, U85195, AC006581, AE000658, AC004883, Z97054, AC006487, AI049636, AL023553, AC005184, AC004020, AL034421, AL031584, AC009516, AC010206, AI022323, U95741, AC002984, AL121694, AC007981, AP000208, AP000557, AC005013, AC002542, Z82201, AC005821, AC005899, AL117352, AL031466, AC005512, AC005261, AC004804, AP000247, Z95114, AL031767, AP000130, AC006101, AC006459, AC003071, U96629, AI049631, Z83822, AC006162, AC005786, AC004913, AP00030, AC005562, AC004706, AC005049, AC010582, AL031289, AL021397, AC006001, AC006285, AC005411, AC005778, AC005874, AF134471, AP000501, AC004814, AL080241, AC004837, AC007546, AL109628, Z84480, AC007052, AC006445, AL109798, AP000134, Z98946, |

TABLE 4

| Code | Description | Tissue | Organ | Cell Line | Disease | Vector |
|-------|---|---|-------|-----------|---------|--------|
| AR022 | a_Heart | a_Heart | | | | |
| AR023 | a_Liver | a_Liver | | | | |
| AR024 | a_mammary gland | a_mammary gland | | | | |
| AR025 | a_Prostate | a_Prostate | | | | |
| AR026 | a_small intestine | a_small intestine | | | | |
| AR027 | a_Stomach | a_Stomach | | | | |
| AR028 | Blood B cells | Blood B cells | | | | |
| AR029 | Blood B cells activated | Blood B cells activated | | | | |
| AR030 | Blood B cells resting | Blood B cells resting | | | | |
| AR031 | Blood T cells activated | Blood T cells activated | | | | |
| AR032 | Blood T cells resting | Blood T cells resting | | | | |
| AR033 | brain | brain | | | | |
| AR034 | breast | breast | | | | |
| AR035 | breast cancer | breast cancer | | | | |
| AR036 | Cell Line CAOV3 | Cell Line CAOV3 | | | | |
| AR037 | cell line PA-1 | cell line PA-1 | | | | |
| AR038 | cell line transformed | cell line transformed | | | | |
| AR039 | colon | colon | | | | |
| AR040 | colon (9808co65R) | colon (9808co65R) | | | | |
| AR041 | colon (9809co15) | colon (9809co15) | | | | |
| AR042 | colon cancer | colon cancer | | | | |
| AR043 | colon cancer (9808co64R) | colon cancer (9808co64R) | | | | |
| AR044 | colon cancer 9809co14 | colon cancer 9809co14 | | | | |
| AR045 | corn clone 5 | corn clone 5 | | | | |
| AR046 | corn clone 6 | corn clone 6 | | | | |
| AR047 | corn clone2 | corn clone2 | | | | |
| AR048 | corn clone3 | corn clone3 | | | | |
| AR049 | Corn Clone4 | Corn Clone4 | | | | |
| AR050 | Donor II B Cells 24hrs | Donor II B Cells 24hrs | | | | |
| AR051 | Donor II B Cells 72hrs | Donor II B Cells 72hrs | | | | |
| AR052 | Donor II B-Cells 24 hrs. | Donor II B-Cells 24 hrs. | | | | |
| AR053 | Donor II B-Cells 72hrs | Donor II B-Cells 72hrs | | | | |
| AR054 | Donor II Resting B Cells | Donor II Resting B Cells | | | | |
| AR055 | Heart | Heart | | | | |
| AR056 | Human Lung (clonetech) | Human Lung (clonetech) | | | | |
| AR057 | Human Mammary (clonetech) | Human Mammary (clonetech) | | | | |
| AR058 | Human Thymus (clonetech) | Human Thymus (clonetech) | | | | |
| AR059 | Jurkat (unstimulated) | Jurkat (unstimulated) | | | | |
| AR060 | Kidney | Kidney | | | | |
| AR061 | Liver | Liver | | | | |
| AR062 | Liver (Clontech) | Liver (Clontech) | | | | |
| AR063 | Lymphocytes chronic lymphocytic leukaemia | Lymphocytes chronic lymphocytic leukaemia | | | | |

| | | | | | | | |
|-------|---|---|--|--|--|--|--|
| AR064 | Lymphocytes diffuse large B cell lymphoma | Lymphocytes diffuse large B cell lymphoma | | | | | |
| AR065 | Lymphocytes follicular lymphoma | Lymphocytes follicular lymphoma | | | | | |
| AR066 | normal breast | normal breast | | | | | |
| AR067 | Normal Ovarian (4004901) | Normal Ovarian (4004901) | | | | | |
| AR068 | Normal Ovary 9508G045 | Normal Ovary 9508G045 | | | | | |
| AR069 | Normal Ovary 9701G208 | Normal Ovary 9701G208 | | | | | |
| AR070 | Normal Ovary 9806G005 | Normal Ovary 9806G005 | | | | | |
| AR071 | Ovarian Cancer | Ovarian Cancer | | | | | |
| AR072 | Ovarian Cancer (9702G001) | Ovarian Cancer (9702G001) | | | | | |
| AR073 | Ovarian Cancer (9707G029) | Ovarian Cancer (9707G029) | | | | | |
| AR074 | Ovarian Cancer (9804G011) | Ovarian Cancer (9804G011) | | | | | |
| AR075 | Ovarian Cancer (9806G019) | Ovarian Cancer (9806G019) | | | | | |
| AR076 | Ovarian Cancer (9807G017) | Ovarian Cancer (9807G017) | | | | | |
| AR077 | Ovarian Cancer (9809G001) | Ovarian Cancer (9809G001) | | | | | |
| AR078 | ovarian cancer 15799 | ovarian cancer 15799 | | | | | |
| AR079 | Ovarian Cancer 17717AID | Ovarian Cancer 17717AID | | | | | |
| AR080 | Ovarian Cancer 4004664B1 | Ovarian Cancer 4004664B1 | | | | | |
| AR081 | Ovarian Cancer 4005315A1 | Ovarian Cancer 4005315A1 | | | | | |
| AR082 | ovarian cancer 94127303 | ovarian cancer 94127303 | | | | | |
| AR083 | Ovarian Cancer 96069304 | Ovarian Cancer 96069304 | | | | | |
| AR084 | Ovarian Cancer 9707G029 | Ovarian Cancer 9707G029 | | | | | |
| AR085 | Ovarian Cancer 9807G045 | Ovarian Cancer 9807G045 | | | | | |
| AR086 | ovarian cancer 9809G001 | ovarian cancer 9809G001 | | | | | |
| AR087 | Ovarian Cancer 9905C032RC | Ovarian Cancer 9905C032RC | | | | | |
| AR088 | Ovarian cancer 9907 C00 3rd | Ovarian cancer 9907 C00 3rd | | | | | |
| AR089 | Prostate | Prostate | | | | | |
| AR090 | Prostate (clonetech) | Prostate (clonetech) | | | | | |
| AR091 | prostate cancer | prostate cancer | | | | | |
| AR092 | prostate cancer #15176 | prostate cancer #15176 | | | | | |
| AR093 | prostate cancer #15509 | prostate cancer #15509 | | | | | |
| AR094 | prostate cancer #15673 | prostate cancer #15673 | | | | | |
| AR095 | Small Intestine (Clontech) | Small Intestine (Clontech) | | | | | |
| AR096 | Spleen | Spleen | | | | | |
| AR097 | Thymus T cells activated | Thymus T cells | | | | | |

| | | | | | | |
|-------|---|------------------------------------|------------|-----------|---------|---------------|
| | | activated | | | | |
| AR098 | Thymus T cells resting | Thymus T cells resting | | | | |
| AR099 | Tonsil | Tonsil | | | | |
| AR100 | Tonsil germinal center centroblast | Tonsil germinal center centroblast | | | | |
| AR101 | Tonsil germinal center B cell | Tonsil germinal center B cell | | | | |
| AR102 | Tonsil lymph node | Tonsil lymph node | | | | |
| AR103 | Tonsil memory B cell | Tonsil memory B cell | | | | |
| AR104 | Whole Brain | Whole Brain | | | | |
| AR105 | Xenograft ES-2 | Xenograft ES-2 | | | | |
| AR106 | Xenograft SW626 | Xenograft SW626 | | | | |
| H0004 | Human Adult Spleen | Human Adult Spleen | Spleen | | | Uni-ZAP XR |
| H0013 | Human 8 Week Whole Embryo | Human 8 Week Old Embryo | Embryo | | | Uni-ZAP XR |
| H0022 | Jurkat Cells | Jurkat T-Cell Line | | | | Lambda ZAP II |
| H0025 | Human Adult Lymph Node | Human Adult Lymph Node | Lymph Node | | | Lambda ZAP II |
| H0031 | Human Placenta | Human Placenta | Placenta | | | Uni-ZAP XR |
| H0050 | Human Fetal Heart | Human Fetal Heart | Heart | | | Uni-ZAP XR |
| H0057 | Human Fetal Spleen | | | | | Uni-ZAP XR |
| H0058 | Human Thymus Tumor | Human Thymus Tumor | Thymus | | disease | Lambda ZAP II |
| H0059 | Human Uterine Cancer | Human Uterine Cancer | Uterus | | disease | Lambda ZAP II |
| H0060 | Human Macrophage | Human Macrophage | Blood | Cell Line | | pBluescript |
| H0061 | Human Macrophage | Human Macrophage | Blood | Cell Line | | pBluescript |
| H0062 | Human Thymus | Human Thymus | Thymus | | | Uni-ZAP XR |
| H0063 | Human Thymus | Human Thymus | Thymus | | | Uni-ZAP XR |
| H0069 | Human Activated T-Cells | Activated T-Cells | Blood | Cell Line | | Uni-ZAP XR |
| H0073 | Human Leiomyseloid Carcinoma | Human Leiomyseloid Carcinoma | Muscle | | disease | Uni-ZAP XR |
| H0074 | Human Platelets | Human Platelets | Blood | Cell Line | | Uni-ZAP XR |
| H0075 | Human Activated T-Cells (II) | Activated T-Cells | Blood | Cell Line | | Uni-ZAP XR |
| H0083 | HUMAN JURKAT MEMBRANE BOUND POLYSOMES | Jurkat Cells | | | | Uni-ZAP XR |
| H0087 | Human Thymus | Human Thymus | | | | pBluescript |
| H0090 | Human T-Cell Lymphoma | T-Cell Lymphoma | T-Cell | | disease | Uni-ZAP XR |
| H0108 | Human Adult Lymph Node, subtracted | Human Adult Lymph Node | Lymph Node | | | Uni-ZAP XR |
| H0109 | Human Macrophage, subtracted | Macrophage | Blood | Cell Line | | pBluescript |
| H0116 | Human Thymus Tumor, subtracted | Human Thymus Tumor | Thymus | | | pBluescript |
| H0128 | Jurkat cells, thiouridine activated | Jurkat Cells | | | | Uni-ZAP XR |
| H0129 | Jurkat cells, thiouridine activated, fract II | Jurkat Cells | | | | Uni-ZAP XR |

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|-------|---|---|------------|-----------|--|---------------|
| H0134 | Raji Cells, cyclohexamide treated | Cyclohexamide Treated Cem, Jurkat, Raji, and Supt | Blood | Cell Line | | Uni-ZAP XR |
| H0139 | Activated T-Cells, 4 hrs. | Activated T-Cells | Blood | Cell Line | | Uni-ZAP XR |
| H0140 | Activated T-Cells, 8 hrs. | Activated T-Cells | Blood | Cell Line | | Uni-ZAP XR |
| H0141 | Activated T-Cells, 12 hrs. | Activated T-Cells | Blood | Cell Line | | Uni-ZAP XR |
| H0158 | Activated T-Cells, 4 hrs., ligation 2 | Activated T-Cells | Blood | Cell Line | | Uni-ZAP XR |
| H0159 | Activated T-Cells, 8 hrs., ligation 2 | Activated T-Cells | Blood | Cell Line | | Uni-ZAP XR |
| H0160 | Activated T-Cells, 12 hrs., ligation 2 | Activated T-Cells | Blood | Cell Line | | Uni-ZAP XR |
| H0161 | Activated T-Cells, 24 hrs., ligation 2 | Activated T-Cells | Blood | Cell Line | | Uni-ZAP XR |
| H0167 | Activated T-Cells, 24 hrs. | Activated T-Cells | Blood | Cell Line | | Uni-ZAP XR |
| H0179 | Human Neutrophil | Human Neutrophil | Blood | Cell Line | | Uni-ZAP XR |
| H0185 | Activated T-Cell labeled with 4-thiouridine | T-Cells | Blood | Cell Line | | Lambda ZAP II |
| H0186 | Activated T-Cell | T-Cells | Blood | Cell Line | | Lambda ZAP II |
| H0187 | Resting T-Cell | T-Cells | Blood | Cell Line | | Lambda ZAP II |
| H0189 | Human Resting Macrophage | Human Macrophage/Monocytes | Blood | Cell Line | | Uni-ZAP XR |
| H0191 | Human Activated Macrophage (LPS), thiouridine | Human Macrophage/Monocytes | Blood | Cell Line | | Uni-ZAP XR |
| H0202 | Jurkat Cells, cyclohexamide treated, subtraction | Cyclohexamide Treated Cem, Jurkat, Raji, and Supt | Blood | Cell Line | | Uni-ZAP XR |
| H0203 | Jurkat Cells, cyclohexamide treated, difference | Cyclohexamide Treated Cem, Jurkat, Raji, and Supt | Blood | Cell Line | | Uni-ZAP XR |
| H0218 | Activated T-Cells, 0 hrs, subtracted | Activated T-Cells | Blood | Cell Line | | Uni-ZAP XR |
| H0219 | Activated T-Cells, 0 hrs, differentially expressed | Activated T-Cells | Blood | Cell Line | | Uni-ZAP XR |
| H0220 | Activated T-Cells, 4 hrs, subtracted | Activated T-Cells | Blood | Cell Line | | Uni-ZAP XR |
| H0221 | Activated T-Cells, 4 hrs, differentially expressed | Activated T-Cells | Blood | Cell Line | | Uni-ZAP XR |
| H0222 | Activated T-Cells, 8 hrs, subtracted | Activated T-Cells | Blood | Cell Line | | Uni-ZAP XR |
| H0223 | Activated T-Cells, 8 hrs, differentially expressed | Activated T-Cells | Blood | Cell Line | | Uni-ZAP XR |
| H0224 | Activated T-Cells, 12 hrs, subtracted | Activated T-Cells | Blood | Cell Line | | Uni-ZAP XR |
| H0225 | Activated T-Cells, 12 hrs, differentially expressed | Activated T-Cells | Blood | Cell Line | | Uni-ZAP XR |
| H0250 | Human Activated Monocytes | Human Monocytes | | | | Uni-ZAP XR |
| H0253 | Human adult testis, large inserts | Human Adult Testis | Testis | | | Uni-ZAP XR |
| H0254 | Breast Lymph node cDNA library | Breast Lymph Node | Lymph Node | | | Uni-ZAP XR |
| H0255 | breast lymph node CDNA | Breast Lymph Node | Lymph Node | | | Lambda |

| | library | | | | | ZAP II |
|-------|--|---------------------------------------|----------------|-----------|---------|---------------|
| H0261 | H. cerebellum, Enzyme subtracted | Human Cerebellum | Brain | | | Uni-ZAP XR |
| H0264 | human tonsils | Human Tonsil | Tonsil | | | Uni-ZAP XR |
| H0265 | Activated T-Cell (12hs)/Thiouridine labelledEco | T-Cells | Blood | Cell Line | | Uni-ZAP XR |
| H0271 | Human Neutrophil, Activated | Human Neutrophil - Activated | Blood | Cell Line | | Uni-ZAP XR |
| H0272 | HUMAN TONSILS, FRACTION 2 | Human Tonsil | Tonsil | | | Uni-ZAP XR |
| H0274 | Human Adult Spleen, fractionII | Human Adult Spleen | Spleen | | | Uni-ZAP XR |
| H0300 | CD34 positive cells (Cord Blood) | CD34 Positive Cells | Cord Blood | | | ZAP Express |
| H0305 | CD34 positive cells (Cord Blood) | CD34 Positive Cells | Cord Blood | | | ZAP Express |
| H0306 | CD34 depleted Buffy Coat (Cord Blood) | CD34 Depleted Buffy Coat (Cord Blood) | Cord Blood | | | ZAP Express |
| H0318 | HUMAN B CELL LYMPHOMA | Human B Cell Lymphoma | Lymph Node | | disease | Uni-ZAP XR |
| H0341 | Bone Marrow Cell Line (RS4;11) | Bone Marrow Cell Line RS4;11 | Bone Marrow | Cell Line | | Uni-ZAP XR |
| H0354 | Human Leukocytes | Human Leukocytes | Blood | Cell Line | | pCMVSPORT 1 |
| H0369 | H. Atrophic Endometrium | Atrophic Endometrium and myometrium | | | | Uni-ZAP XR |
| H0370 | H. Lymph node breast Cancer | Lymph node with Met. Breast Cancer | | | disease | Uni-ZAP XR |
| H0376 | Human Spleen | Human Adult Spleen | Spleen | | | pCMVSPORT 1 |
| H0393 | Fetal Liver, subtraction II | Human Fetal Liver | Liver | | | pBluescript |
| H0402 | CD34 depleted Buffy Coat (Cord Blood), re-excision | CD34 Depleted Buffy Coat (Cord Blood) | Cord Blood | | | ZAP Express |
| H0416 | Human Neutrophils, Activated, re-excision | Human Neutrophil - Activated | Blood | Cell Line | | pBluescript |
| H0421 | Human Bone Marrow, re-excision | Bone Marrow | | | | pBluescript |
| H0422 | T-Cell PHA 16 hrs | T-Cells | Blood | Cell Line | | pSport1 |
| H0423 | T-Cell PHA 24 hrs | T-Cells | Blood | Cell Line | | pSport1 |
| H0436 | Resting T-Cell Library,II | T-Cells | Blood | Cell Line | | pSport1 |
| H0439 | Human Eosinophils | Eosinophils | | | | pBluescript |
| H0444 | Spleen metastatic melanoma | Spleen, Metastic malignant melanoma | Spleen | | disease | pSport1 |
| H0445 | Spleen, Chronic lymphocytic leukemia | Human Spleen, CLL | Spleen | | disease | pSport1 |
| H0457 | Human Eosinophils | Human Eosinophils | | | | pSport1 |
| H0477 | Human Tonsil, Lib 3 | Human Tonsil | Tonsil | | | pSport1 |
| H0478 | Salivary Gland, Lib 2 | Human Salivary Gland | Salivary gland | | | pSport1 |
| H0485 | Hodgkin's Lymphoma I | Hodgkin's Lymphoma I | | | disease | pCMVSPORT 2.0 |
| H0486 | Hodgkin's Lymphoma II | Hodgkin's Lymphoma II | | | disease | pCMVSPORT 2.0 |
| H0487 | Human Tonsils, lib I | Human Tonsils | | | | pCMVSPORT 2.0 |
| H0488 | Human Tonsils, Lib 2 | Human Tonsils | | | | pCMVSPORT |

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| | | | | | | 2.0 |
| H0494 | Keratinocyte | Keratinocyte | | | | pCMVSport 2.0 |
| H0506 | Ulcerative Colitis | Colon | Colon | | | pSport1 |
| H0510 | Human Liver, normal | Human Liver, normal, Patient # 8 | Liver | | | pCMVSport 3.0 |
| H0518 | pBMC stimulated w/ poly I/C | pBMC stimulated with poly I/C | | | | pCMVSport 3.0 |
| H0521 | Primary Dendritic Cells, lib 1 | Primary Dendritic cells | | | | pCMVSport 3.0 |
| H0522 | Primary Dendritic cells,frac 2 | Primary Dendritic cells | | | | pCMVSport 3.0 |
| H0524 | Primary Dendritic Cells, CapFinder, frac 2 | Primary Dendritic cells | | | | pSport1 |
| H0529 | Myeloid Progenitor Cell Line | TF-1 Cell Line; Myeloid progenitor cell line | | | | pCMVSport 3.0 |
| H0537 | H. Primary Dendritic Cells,lib 3 | Primary Dendritic cells | | | | pCMVSport 2.0 |
| H0542 | T Cell helper I | Helper T cell | | | | pCMVSport 3.0 |
| H0543 | T cell helper II | Helper T cell | | | | pCMVSport 3.0 |
| H0545 | Human endometrial stromal cells-treated with progesterone | Human endometrial stromal cells-treated with proge | | | | pCMVSport 3.0 |
| H0551 | Human Thymus Stromal Cells | Human Thymus Stromal Cells | | | | pCMVSport 3.0 |
| H0552 | Signal trap,Femur Bone Marrow,pooled | Femur Bone marrow, pooled from 8 male/female | | | | Other |
| H0556 | Activated T-cell(12h)/Thiouridine-re-excision | T-Cells | Blood | Cell Line | | Uni-ZAP XR |
| H0560 | KMH2 | KMH2 | | | | pCMVSport 3.0 |
| H0575 | Human Adult Pulmonary,re-excision | Human Adult Pulmonary | Lung | | | Uni-ZAP XR |
| H0576 | Resting T-Cell; re-excision | T-Cells | Blood | Cell Line | | Lambda ZAP II |
| H0578 | Human Fetal Thymus | Fetal Thymus | Thymus | | | pSport1 |
| H0580 | Dendritic cells, pooled | Pooled dendritic cells | | | | pCMVSport 3.0 |
| H0581 | Human Bone Marrow, treated | Human Bone Marrow | Bone Marrow | | | pCMVSport 3.0 |
| H0583 | B Cell lymphoma | B Cell Lymphoma | B Cell | | disease | pCMVSport 3.0 |
| H0584 | Activated T-cells, 24 hrs,re-excision | Activated T-Cells | Blood | Cell Line | | Uni-ZAP XR |
| H0585 | Activated T-Cells,12 hrs,re-excision | Activated T-Cells | Blood | Cell Line | | Uni-ZAP XR |
| H0589 | CD34 positive cells (cord blood),re-ex | CD34 Positive Cells | Cord Blood | | | ZAP Express |
| H0591 | Human T-cell lymphoma,re-excision | T-Cell Lymphoma | T-Cell | | disease | Uni-ZAP XR |
| H0606 | Human Primary Breast Cancer,re-excision | Human Primary Breast Cancer | Breast | | disease | Uni-ZAP XR |
| H0607 | H.Leukocytes, normalized cot 50A3 | H.Leukocytes | | | | pCMVSport 1 |
| H0608 | H. Leukocytes, control | H.Leukocytes | | | | pCMVSport 1 |
| H0609 | H. Leukocytes, | H.Leukocytes | | | | pCMVSport |

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| | normalized cot > 500A | | | | | 1 |
| H0610 | H. Leukocytes, normalized cot 5A | H.Leukocytes | | | | pCMVSport 1 |
| H0611 | H. Leukocytes, normalized cot 500 B | H.Leukocytes | | | | pCMVSport 1 |
| H0612 | H.Leukocytes, normalized cot 50 B | H.Leukocytes | | | | pCMVSport 1 |
| H0614 | H. Leukocytes, normalized cot 500 A | H.Leukocytes | | | | pCMVSport 1 |
| H0625 | Ku 812F Basophils Line | Ku 812F Basophils | | | | pSport1 |
| H0635 | Human Activated T-Cells, re-excision . | Activated T-Cells | Blood | Cell Line | | Uni-ZAP XR |
| H0637 | Dendritic Cells From CD34 Cells | Dentritic cells from CD34 cells | | | | pSport1 |
| H0638 | CD40 activated monocyte dendritic cells | CD40 activated monocyte dendritic cells | | | | pSport1 |
| H0641 | LPS activated derived dendritic cells | LPS activated monocyte derived dendritic cells | | | | pSport1 |
| H0650 | B-Cells | B-Cells | | | | pCMVSport 3.0 |
| H0653 | Stromal Cells | Stromal Cells | | | | pSport1 |
| H0656 | B-cells (unstimulated) | B-cells (unstimulated) | | | | pSport1 |
| H0657 | B-cells (stimulated) | B-cells (stimulated) | | | | pSport1 |
| H0659 | Ovary, Cancer (15395A1F): Grade II Papillary Carcinoma | Grade II Papillary Carcinoma, Ovary | Ovary | | disease | pSport1 |
| H0660 | Ovary, Cancer: (15799A1F) Poorly differentiated carcinoma | Poorly differentiated carcinoma, ovary | | | disease | pSport1 |
| H0673 | Human Prostate Cancer, Stage B2; re-excision | Human Prostate Cancer, stage B2 | Prostate | | | Uni-ZAP XR |
| H0677 | TNFR degenerate oligo | B-Cells | | | | PCRII |
| H0679 | screened clones from Tonsil library | Human Tonsils | | | | Other |
| S0002 | Monocyte activated | Monocyte-activated | blood | Cell Line | | Uni-ZAP XR |
| S0026 | Stromal cell TF274 | stromal cell | Bone marrow | Cell Line | | Uni-ZAP XR |
| S0027 | Smooth muscle, serum treated | Smooth muscle | Pulmonary artery | Cell Line | | Uni-ZAP XR |
| S0031 | Spinal cord | Spinal cord | spinal cord | | | Uni-ZAP XR |
| S0052 | neutrophils control | human neutrophils | blood | Cell Line | | Uni-ZAP XR |
| S0053 | Neutrophils IL-1 and LPS induced | human neutrophil induced | blood | Cell Line | | Uni-ZAP XR |
| S0114 | Anergic T-cell | Anergic T-cell | | Cell Line | | Uni-ZAP XR |
| S0116 | Bone marrow | Bone marrow | Bone marrow | | | Uni-ZAP XR |
| S0134 | Apoptotic T-cell | apoptotic cells | | Cell Line | | Uni-ZAP XR |
| S0140 | eosinophil-IL5 induced | eosinophil | lung | Cell Line | | Uni-ZAP XR |
| S0142 | Macrophage-oxLDL | macrophage- oxidized LDL treated | blood | Cell Line | | Uni-ZAP XR |
| S0144 | Macrophage (GM-CSF treated) | Macrophage (GM- CSF treated) | | | | Uni-ZAP XR |

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|-------|--|---|--------------------|-----------|---------|--------------------|
| S0180 | Bone Marrow Stroma, TNF&LPS ind | Bone Marrow Stroma, TNF & LPS induced | | | disease | Uni-ZAP XR |
| S0182 | Human B Cell 8866 | Human B- Cell 8866 | | | | Uni-ZAP XR |
| S0196 | Synovial IL-1/TNF stimulated | Synovial Fibroblasts | | | | pSport1 |
| S0212 | Bone Marrow Stromal Cell, untreated | Bone Marrow Stromal Cell,untreated | | | | pSport1 |
| S0216 | Neutrophils IL-1 and LPS induced | human neutrophil induced | blood | Cell Line | | Uni-ZAP XR |
| S0218 | Apoptotic T-cell, re- excision | apoptotic cells | | Cell Line | | Uni-ZAP XR |
| S0222 | H. Frontal cortex,epileptic;re- excision | H. Brain, Frontal Cortex, Epileptic | Brain | | disease | Uni-ZAP XR |
| S0278 | H Macrophage (GM-CSF treated), re-excision | Macrophage (GM- CSF treated) | | | | Uni-ZAP XR |
| S0282 | Brain Frontal Cortex, re- excision | Brain frontal cortex | Brain | | | Lambda ZAP II |
| S0292 | Osteoarthritis (OA-4) | Human Osteoarthritic Cartilage | Bone | | disease | pSport1 |
| S0298 | Bone marrow stroma,treated | Bone marrow stroma,treatedSB | Bone marrow | | | pSport1 |
| S0308 | Spleen/normal | Spleen normal | | | | pSport1 |
| S0314 | Human osteoarthritis;fraction I | Human osteoarthritic cartilage | | | disease | pSport1 |
| S0344 | Macrophage-oxLDL; re- excision | macrophage- oxidized LDL treated | blood | Cell Line | | Uni-ZAP XR |
| S0358 | Colon Normal III | Colon Normal | Colon | | | pSport1 |
| S0418 | CHME Cell Line;treated 5 hrs | CHME Cell Line; treated | | | | pCMVSport 3.0 |
| S0426 | Monocyte activated; re- excision | Monocyte-activated | blood | Cell Line | | Uni-ZAP XR |
| S0428 | Neutrophils control; re- excision | human neutrophils | blood | Cell Line | | Uni-ZAP XR |
| S0442 | Colon Normal | Colon Normal | | | | pSport1 |
| S0452 | Thymus | Thymus | | | | pSport1 |
| S0474 | Human blood platelets | Platelets | Blood platelets | | | Other |
| S3016 | Basophil | Basophil | | | | Uni-ZAP XR |
| S3018 | TH1 cells | TH1 cells | | | | Uni-ZAP XR |
| S3020 | TH2 cells | TH2 cells | | | | Uni-ZAP XR |
| S6028 | Human Manic Depression Tissue | Human Manic depression tissue | Brain | | disease | Uni-ZAP XR |
| T0002 | Activated T-cells | Activated T-Cell, PBL fraction | Blood | Cell Line | | pBluescript SK- |
| T0041 | Jurkat T-cell G1 phase | Jurkat T-cell | | | | pBluescript SK- |
| T0042 | Jurkat T-Cell, S phase | Jurkat T-Cell Line | | | | pBluescript SK- |
| T0071 | Human Bone Marrow | Human Bone Marrow | | | | pBluescript SK- |
| L0002 | Atrium cDNA library Human heart | | | | | |

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|-------|--|---------------------------------------|-------|--|--|-----------------|--|
| L0004 | ClonTech HL 1065a | | | | | | |
| L0005 | Clontech human aorta polyA+ mRNA (#6572) | | | | | | |
| L0017 | Human (J. Swensen) | | | | | | |
| L0020 | Human activated dendritic cell mRNA | | | | | | |
| L0021 | Human adult (K. Okubo) | | | | | | |
| L0036 | Human chromosome 21q22 mRNA | | | | | | |
| L0040 | Human colon mucosa | | | | | | |
| L0041 | Human epidermal keratinocyte | | | | | | |
| L0051 | Human mRNA (Tripodis and Ragoussis) | | | | | | |
| L0055 | Human promyelocyte | | | | | | |
| L0060 | Human thymus NSTH II | | | | | | |
| L0065 | Liver HepG2 cell line. | | | | | | |
| L0070 | Selected chromosome 21 cDNA library | | | | | | |
| L0109 | Human brain cDNA | brain | | | | | |
| L0142 | Human placenta cDNA (TFujiwara) | placenta | | | | | |
| L0143 | Human placenta polyA+ (TFujiwara) | placenta | | | | | |
| L0157 | Human fetal brain (TFujiwara) | | brain | | | | |
| L0163 | Human heart cDNA (YNakamura) | | heart | | | | |
| L0171 | Human lung adenocarcinoma A549 | lung adenocarcinoma | | A549 | | | |
| L0177 | Human newborn melanocytes (T.Vogt) | | | Clonetics Corp. (San Diego, CA) strain #68 and 2486 | | | |
| L0239 | Homo sapiens brain fetus | brain | | | | | |
| L0307 | Human C3-A11N | | | C3-A11N; clonally related variant of OCI LY8-C3P | | | |
| L0309 | Human E8CASS | breast adenocarcinoma | | E8CASS; variant of MCF7 | | | |
| L0352 | Normalized infant brain, Bento Soares | | | | | BA, M13-derived | |
| L0361 | Stratagene ovary (#937217) | | ovary | | | Bluescript SK | |
| L0362 | Stratagene ovarian cancer (#937219) | | | | | Bluescript SK- | |
| L0363 | NCI_CGAP_GC2 | germ cell tumor | | | | Bluescript SK- | |
| L0365 | NCI_CGAP_Phe1 | pheochromocytoma | | | | Bluescript SK- | |
| L0366 | Stratagene schizo brain S11 | schizophrenic brain S-11 frontal lobe | | | | Bluescript SK- | |
| L0367 | NCI_CGAP_Sch1 | Schwannoma tumor | | | | Bluescript SK- | |

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|-------|--|--|---------------|-------|--|---------------------------------|
| L0368 | NCI_CGAP_SS1 | synovial sarcoma | | | | Bluescript SK- |
| L0369 | NCI_CGAP_AA1 | adrenal adenoma | adrenal gland | | | Bluescript SK- |
| L0370 | Johnston frontal cortex | pooled frontal lobe | brain | | | Bluescript SK- |
| L0375 | NCI_CGAP_Kid6 | kidney tumor | kidney | | | Bluescript SK- |
| L0376 | NCI_CGAP_Lar1 | larynx | larynx | | | Bluescript SK- |
| L0377 | NCI_CGAP_HN2 | squamous cell carcinoma from vocal cord | larynx | | | Bluescript SK- |
| L0378 | NCI_CGAP_Lu1 | lung tumor | lung | | | Bluescript SK- |
| L0381 | NCI_CGAP_HN4 | squamous cell carcinoma | pharynx | | | Bluescript SK- |
| L0383 | NCI_CGAP_Pr24 | invasive tumor (cell line) | prostate | | | Bluescript SK- |
| L0384 | NCI_CGAP_Pr23 | prostate tumor | prostate | | | Bluescript SK- |
| L0385 | NCI_CGAP_Gas1 | gastric tumor | stomach | | | Bluescript SK- |
| L0386 | NCI_CGAP_HN3 | squamous cell carcinoma from base of tongue | tongue | | | Bluescript SK- |
| L0387 | NCI_CGAP_GCB0 | germinal center B-cells | tonsil | | | Bluescript SK- |
| L0389 | NCI_CGAP_HN5 | normal gingiva (cell line from primary keratinocyt | | | | Bluescript SK- |
| L0394 | H, Human adult Brain Cortex tissue | | | | | gt11 |
| L0415 | b4HB3MA Cot8-HAP-Ft | | | | | Lafmid BA |
| L0435 | Infant brain, LLNL array of Dr. M. Soares 1NIB | | | | | lafmid BA |
| L0438 | normalized infant brain cDNA | total brain | brain | | | lafmid BA |
| L0439 | Soares infant brain 1NIB | | whole brain | | | Lafmid BA |
| L0451 | N3HFLSK20 | | | | | Lafmid K |
| L0452 | Chromosome 21, K. Gardiner | | | | | Lambda |
| L0455 | Human retina cDNA randomly primed sublibrary | retina | eye | | | lambda gt10 |
| L0456 | Human retina cDNA Tsp509I-cleaved sublibrary | retina | eye | | | lambda gt10 |
| L0457 | multi-tissue normalized short-fragment | multi-tissue | pooled | | | lambda gt10 |
| L0459 | Adult heart, Clontech | | | | | Lambda gt11 |
| L0462 | WATM1 | | | | | lambda gt11 |
| L0465 | TEST1, Human adult Testis tissue | | | | | lambda nm1149 |
| L0468 | HE6W | | | | | lambda zap |
| L0471 | Human fetal heart, Lambda ZAP Express | | | | | Lambda ZAP Express |
| L0475 | KG1-a Lambda Zap Express cDNA library | | | KG1-a | | Lambda Zap Express (Stratagene) |
| L0476 | Fetal brain, Stratagene | | | | | Lambda ZAP II |

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|-------|--|---|-------------|--|--|----------------------------------|
| L0480 | Stratagene cat#937212 (1992) | | | | | Lambda ZAP, pBluescript SK(-) |
| L0481 | CD34+DIRECTIONAL | | | | | Lambda ZAPII |
| L0483 | Human pancreatic islet | | | | | Lambda ZAPII |
| L0485 | STRATAGENE Human skeletal muscle cDNA library, cat. #936215. | skeletal muscle | leg muscle | | | Lambda ZAPII |
| L0492 | Human Genomic | | | | | pAMP |
| L0493 | NCI_CGAP_Ov26 | papillary serous carcinoma | ovary | | | pAMP1 |
| L0498 | NCI_CGAP_HSC3 | CD34+, T negative, patient with chronic myelogenous | bone marrow | | | pAMP1 |
| L0506 | NCI_CGAP_Br16 | lobular carcinoma in situ | breast | | | pAMP1 |
| L0508 | NCI_CGAP_Lu25 | bronchioalveolar carcinoma | lung | | | pAMP1 |
| L0509 | NCI_CGAP_Lu26 | invasive adenocarcinoma | lung | | | pAMP1 |
| L0512 | NCI_CGAP_Ov36 | borderline ovarian carcinoma | ovary | | | pAMP1 |
| L0513 | NCI_CGAP_Ov37 | early stage papillary serous carcinoma | ovary | | | pAMP1 |
| L0515 | NCI_CGAP_Ov32 | papillary serous carcinoma | ovary | | | pAMP1 |
| L0517 | NCI_CGAP_Pr1 | | | | | pAMP10 |
| L0518 | NCI_CGAP_Pr2 | | | | | pAMP10 |
| L0519 | NCI_CGAP_Pr3 | | | | | pAMP10 |
| L0520 | NCI_CGAP_Alv1 | alveolar rhabdomyosarcoma | | | | pAMP10 |
| L0521 | NCI_CGAP_Ew1 | Ewing's sarcoma | | | | pAMP10 |
| L0523 | NCI_CGAP_Lip2 | liposarcoma | | | | pAMP10 |
| L0526 | NCI_CGAP_Pr12 | metastatic prostate bone lesion | | | | pAMP10 |
| L0527 | NCI_CGAP_Ov2 | ovary | | | | pAMP10 |
| L0528 | NCI_CGAP_Pr5 | prostate | | | | pAMP10 |
| L0529 | NCI_CGAP_Pr6 | prostate | | | | pAMP10 |
| L0530 | NCI_CGAP_Pr8 | prostate | | | | pAMP10 |
| L0532 | NCI_CGAP_Thy1 | thyroid | | | | pAMP10 |
| L0534 | Chromosome 7 Fetal Brain cDNA Library | brain | brain | | | pAMP10 |
| L0535 | NCI_CGAP_Br5 | infiltrating ductal carcinoma | breast | | | pAMP10 |
| L0539 | Chromosome 7 Placental cDNA Library | | placenta | | | pAMP10 |
| L0541 | NCI_CGAP_Pr7 | low-grade prostatic neoplasia | prostate | | | pAMP10 |
| L0542 | NCI_CGAP_Pr11 | normal prostatic epithelial cells | prostate | | | pAMP10 |
| L0543 | NCI_CGAP_Pr9 | normal prostatic epithelial cells | prostate | | | pAMP10 |
| L0545 | NCI_CGAP_Pr4.1 | prostatic intraepithelial neoplasia - high grade | prostate | | | pAMP10 |
| L0546 | NCI_CGAP_Pr18 | stroma | prostate | | | pAMP10 |
| L0547 | NCI_CGAP_Pr16 | tumor | prostate | | | pAMP10 |
| L0551 | NCI_CGAP_HN7 | normal squamous | | | | pAMP10 |

| | | | | | | |
|-------|---|----------------------------|-----------------|----------------------|--|------------------------------|
| | | epithelium, floor of mouth | | | | |
| L0556 | NCI_CGAP_Lu34.1 | large cell carcinoma | lung | | | pAMP10 |
| L0562 | Chromosome 7 HeLa cDNA Library | | | HeLa cell line; ATCC | | pAMP10 |
| L0565 | Normal Human Trabecular Bone Cells | Bone | Hip | | | pBluescript |
| L0581 | Stratagene liver (#937224) | | liver | | | pBluescript SK |
| L0586 | HTCDL1 | | | | | pBluescript SK(-) |
| L0588 | Stratagene endothelial cell 937223 | | | | | pBluescript SK- |
| L0589 | Stratagene fetal retina 937202 | | | | | pBluescript SK- |
| L0590 | Stratagene fibroblast (#937212) | | | | | pBluescript SK- |
| L0591 | Stratagene HeLa cell s3 937216 | | | | | pBluescript SK- |
| L0592 | Stratagene hNT neuron (#937233) | | | | | pBluescript SK- |
| L0593 | Stratagene neuroepithelium (#937231) | | | | | pBluescript SK- |
| L0594 | Stratagene neuroepithelium NT2RAMI 937234 | | | | | pBluescript SK- |
| L0595 | Stratagene NT2 neuronal precursor 937230 | neuroepithelial cells | brain | | | pBluescript SK- |
| L0596 | Stratagene colon (#937204) | | colon | | | pBluescript SK- |
| L0597 | Stratagene corneal stroma (#937222) | | cornea | | | pBluescript SK- |
| L0598 | Morton Fetal Cochlea | cochlea | ear | | | pBluescript SK- |
| L0599 | Stratagene lung (#937210) | | lung | | | pBluescript SK- |
| L0600 | Weizmann Olfactory Epithelium | olfactory epithelium | nose | | | pBluescript SK- |
| L0601 | Stratagene pancreas (#937208) | | pancreas | | | pBluescript SK- |
| L0602 | Pancreatic Islet | pancreatic islet | pancreas | | | pBluescript SK- |
| L0603 | Stratagene placenta (#937225) | | placenta | | | pBluescript SK- |
| L0604 | Stratagene muscle 937209 | muscle | skeletal muscle | | | pBluescript SK- |
| L0605 | Stratagene fetal spleen (#937205) | fetal spleen | spleen | | | pBluescript SK- |
| L0606 | NCI_CGAP_Lym5 | follicular lymphoma | lymph node | | | pBluescript SK- |
| L0607 | NCI_CGAP_Lym6 | mantle cell lymphoma | lymph node | | | pBluescript SK- |
| L0608 | Stratagene lung carcinoma 937218 | lung carcinoma | lung | NCI-H69 | | pBluescript SK- |
| L0612 | Schiller oligodendrogloma | oligodendrogloma | brain | | | pBluescript SK- (Stratagene) |
| L0617 | Chromosome 22 exon | | | | | pBluescriptII KS+ |
| L0619 | Chromosome 9 exon II | | | | | pBluescriptII |

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|-------|----------------|---|---------------------------------|--|--|-------------------------|
| | | | | | | KS+ |
| L0622 | HM1 | | | | | pcDNAII (Invitrogen) |
| L0623 | HM3 | pectoral muscle (after mastectomy) | | | | pcDNAII (Invitrogen) |
| L0626 | NCI_CGAP_GC1 | bulk germ cell seminoma | | | | pCMV- SPORT2 |
| L0629 | NCI_CGAP_Mel3 | metastatic melanoma to bowel | bowel (skin primary) | | | pCMV- SPORT4 |
| L0631 | NCI_CGAP_Br7 | | breast | | | pCMV- SPORT4 |
| L0633 | NCI_CGAP_Lu6 | small cell carcinoma | lung | | | pCMV- SPORT4 |
| L0634 | NCI_CGAP_Ov8 | serous adenocarcinoma | ovary | | | pCMV- SPORT4 |
| L0635 | NCI_CGAP_PNS1 | dorsal root ganglion | peripheral nervous system | | | pCMV- SPORT4 |
| L0637 | NCI_CGAP_Brn53 | three pooled meningiomas | brain | | | pCMV- SPORT6 |
| L0638 | NCI_CGAP_Brn35 | tumor, 5 pooled (see description) | brain | | | pCMV- SPORT6 |
| L0639 | NCI_CGAP_Brn52 | tumor, 5 pooled (see description) | brain | | | pCMV- SPORT6 |
| L0640 | NCI_CGAP_Br18 | four pooled high- grade tumors, including two prima | breast | | | pCMV- SPORT6 |
| L0641 | NCI_CGAP_Co17 | juvenile granulosa tumor | colon | | | pCMV- SPORT6 |
| L0643 | NCI_CGAP_Co19 | moderately differentiated adenocarcinoma | colon | | | pCMV- SPORT6 |
| L0644 | NCI_CGAP_Co20 | moderately differentiated adenocarcinoma | colon | | | pCMV- SPORT6 |
| L0645 | NCI_CGAP_Co21 | moderately differentiated adenocarcinoma | colon | | | pCMV- SPORT6 |
| L0646 | NCI_CGAP_Co14 | moderately- differentiated adenocarcinoma | colon | | | pCMV- SPORT6 |
| L0647 | NCI_CGAP_Sar4 | five pooled sarcomas, including myxoid liposarcoma | connective tissue | | | pCMV- SPORT6 |
| L0648 | NCI_CGAP_Eso2 | squamous cell carcinoma | esophagus | | | pCMV- SPORT6 |
| L0649 | NCI_CGAP_GU1 | 2 pooled high-grade transitional cell tumors | genitourinary tract | | | pCMV- SPORT6 |
| L0651 | NCI_CGAP_Kid8 | renal cell tumor | kidney | | | pCMV- SPORT6 |
| L0652 | NCI_CGAP_Lu27 | four pooled poorly- differentiated adenocarcinomas | lung | | | pCMV- SPORT6 |
| L0653 | NCI_CGAP_Lu28 | two pooled squamous cell carcinomas | lung | | | pCMV- SPORT6 |
| L0654 | NCI_CGAP_Lu31 | | lung, cell line | | | pCMV- SPORT6 |
| L0655 | NCI_CGAP_Lym12 | lymphoma, follicular mixed small and large cell | lymph node | | | pCMV- SPORT6 |
| L0656 | NCI_CGAP_Ov38 | normal epithelium | ovary | | | pCMV- |

| | | | | | | SPORT6 |
|-------|-----------------------------------|--|-------------|--|--|---|
| L0657 | NCI_CGAP_Ov23 | tumor, 5 pooled (see description) | ovary | | | pCMV-SPORT6 |
| L0658 | NCI_CGAP_Ov35 | tumor, 5 pooled (see description) | ovary | | | pCMV-SPORT6 |
| L0659 | NCI_CGAP_Pan1 | adenocarcinoma | pancreas | | | pCMV-SPORT6 |
| L0661 | NCI_CGAP_Mel15 | malignant melanoma, metastatic to lymph node | skin | | | pCMV-SPORT6 |
| L0662 | NCI_CGAP_Gas4 | poorly differentiated adenocarcinoma with signet r | stomach | | | pCMV-SPORT6 |
| L0663 | NCI_CGAP_Ut2 | moderately-differentiated endometrial adenocarcino | uterus | | | pCMV-SPORT6 |
| L0664 | NCI_CGAP_Ut3 | poorly-differentiated endometrial adenocarcinoma, | uterus | | | pCMV-SPORT6 |
| L0665 | NCI_CGAP_Ut4 | serous papillary carcinoma, high grade, 2 pooled t | uterus | | | pCMV-SPORT6 |
| L0666 | NCI_CGAP_Ut1 | well-differentiated endometrial adenocarcinoma, 7 | uterus | | | pCMV-SPORT6 |
| L0667 | NCI_CGAP_CML1 | myeloid cells, 18 pooled CML cases, BCR/ABL rearr | whole blood | | | pCMV-SPORT6 |
| L0682 | Stanley Frontal NB pool 2 | frontal lobe (see description) | brain | | | pCR2.1-TOPO (Invitrogen) |
| L0686 | Stanley Frontal SN pool 2 | frontal lobe (see description) | brain | | | pCR2.1-TOPO (Invitrogen) |
| L0697 | Testis 1 | | | | | PGEM 5zf(+) |
| L0700 | Outward Alu-primed hncDNA library | | | | | pGEM-3Z |
| L0717 | Gessler Wilms tumor | | | | | pSPORT1 |
| L0720 | PN001-Normal Human Prostate | | prostate | | | pSport1 |
| L0731 | Soares_pregnant_uterus_NbHPU | | uterus | | | pT7T3-Pac |
| L0738 | Human colorectal cancer | | | | | pT7T3D |
| L0740 | Soares melanocyte 2NbHM | melanocyte | | | | pT7T3D (Pharmacia) with a modified polylinker |
| L0741 | Soares adult brain N2b4HB55Y | | brain | | | pT7T3D (Pharmacia) with a modified polylinker |
| L0742 | Soares adult brain N2b5HB55Y | | brain | | | pT7T3D (Pharmacia) with a modified polylinker |
| L0743 | Soares breast 2NbHBst | | breast | | | pT7T3D (Pharmacia) |

| | | | | | | |
|-------|--|-------------------|-------------------|--|--|---|
| | | | | | | with a modified polylinker |
| L0744 | Soares breast 3NbHBst | | breast | | | pT7T3D (Pharmacia) with a modified polylinker |
| L0745 | Soares retina N2b4HR | retina | eye | | | pT7T3D (Pharmacia) with a modified polylinker |
| L0746 | Soares retina N2b5HR | retina | eye | | | pT7T3D (Pharmacia) with a modified polylinker |
| L0747 | Soares_fetal_heart_NbHH 19W | | heart | | | pT7T3D (Pharmacia) with a modified polylinker |
| L0748 | Soares fetal liver spleen 1NFLS | | Liver and Spleen | | | pT7T3D (Pharmacia) with a modified polylinker |
| L0749 | Soares_fetal_liver_spleen _1NFLS_S1 | | Liver and Spleen | | | pT7T3D (Pharmacia) with a modified polylinker |
| L0750 | Soares_fetal_lung_NbHL1 9W | | lung | | | pT7T3D (Pharmacia) with a modified polylinker |
| L0751 | Soares ovary tumor NbHOT | ovarian tumor | ovary | | | pT7T3D (Pharmacia) with a modified polylinker |
| L0752 | Soares_parathyroid_tumor _NbHPA | parathyroid tumor | parathyroid gland | | | pT7T3D (Pharmacia) with a modified polylinker |
| L0753 | Soares_pineal_gland_N3H PG | | pineal gland | | | pT7T3D (Pharmacia) with a modified polylinker |
| L0754 | Soares placenta Nb2HP | | placenta | | | pT7T3D (Pharmacia) with a modified polylinker |
| L0755 | Soares_placenta_8to9wee ks_2NbHP8to9W | | placenta | | | pT7T3D (Pharmacia) with a modified polylinker |

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|-------|------------------------------------|------------------------------------|-------|--|--|--|
| L0756 | Soares_multiple_sclerosis_2NbHMSP | multiple sclerosis lesions | | | | pT7T3D (Pharmacia) with a modified polylinker V_TYPE |
| L0757 | Soares_senescent_fibroblasts_NbHSF | senescent fibroblast | | | | pT7T3D (Pharmacia) with a modified polylinker V_TYPE |
| L0758 | Soares_testis_NHT | | | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0759 | Soares_total_fetus_Nb2H F8_9w | | | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0761 | NCI_CGAP_CLL1 | B-cell, chronic lymphotic leukemia | | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0762 | NCI_CGAP_Br1.1 | breast | | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0763 | NCI_CGAP_Br2 | breast | | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0764 | NCI_CGAP_Co3 | colon | | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0766 | NCI_CGAP_GCB1 | germinal center B cell | | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0767 | NCI_CGAP_GC3 | pooled germ cell tumors | | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0768 | NCI_CGAP_GC4 | pooled germ cell tumors | | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0769 | NCI_CGAP_Brn25 | anaplastic oligodendroglioma | brain | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0770 | NCI_CGAP_Brn23 | glioblastoma (pooled) | brain | | | pT7T3D-Pac (Pharmacia) |

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|-------|-----------------------------|--|-------------------|--|--|---|
| | | | | | | with a modified polylinker |
| L0771 | NCI_CGAP_Co8 | adenocarcinoma | colon | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0772 | NCI_CGAP_Co10 | colon tumor RER+ | colon | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0773 | NCI_CGAP_Co9 | colon tumor RER+ | colon | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0774 | NCI_CGAP_Kid3 | | kidney | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0775 | NCI_CGAP_Kid5 | 2 pooled tumors (clear cell type) | kidney | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0776 | NCI_CGAP_Lu5 | carcinoid | lung | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0777 | Soares_NhHMPu_S1 | Pooled human melanocyte, fetal heart, and pregnant | mixed (see below) | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0779 | SoaresNFL_T_GBC_S1 | | pooled | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0780 | Soares_NSF_F8_9W_OT_PA_P_S1 | | pooled | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0783 | NCI_CGAP_Pr22 | normal prostate | prostate | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0784 | NCI_CGAP_Lei2 | leiomyosarcoma | soft tissue | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0785 | Barstead spleen HPLRB2 | | spleen | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |

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|-------|----------------|-----------------------------------|-------------|--|--|---|
| L0786 | Soares_NbHFB | | whole brain | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0787 | NCI_CGAP_Sub1 | | | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0788 | NCI_CGAP_Sub2 | | | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0789 | NCI_CGAP_Sub3 | | | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0790 | NCI_CGAP_Sub4 | | | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0791 | NCI_CGAP_Sub5 | | | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0792 | NCI_CGAP_Sub6 | | | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0794 | NCI_CGAP_GC6 | pooled germ cell tumors | | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0796 | NCI_CGAP_Brn50 | medulloblastoma | brain | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0800 | NCI_CGAP_Co16 | colon tumor, RER+ | colon | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0803 | NCI_CGAP_Kid11 | | kidney | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0804 | NCI_CGAP_Kid12 | 2 pooled tumors (clear cell type) | kidney | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0805 | NCI_CGAP_Lu24 | carcinoid | lung | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |

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|-------|--|--|----------|--|--|---|
| L0806 | NCI_CGAP_Lu19 | squamous cell carcinoma, poorly differentiated (4) | lung | | | polylinker pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L0809 | NCI_CGAP_Pr28 | | prostate | | | pT7T3D-Pac (Pharmacia) with a modified polylinker |
| L2245 | NEM subtracted human fetal kidney cDNA | | | | | pUEX1 |
| L2250 | Human cerebral cortex | cerebral cortex | | | | |
| L2251 | Human fetal lung | Fetal lung | | | | |

TABLE 5

| OMIM Reference | Description |
|-----------------------|---|
| 100678 | ACAT2 deficiency |
| 102578 | Leukemia, acute promyelocytic, PML/RARA type |
| 102770 | Myoadenylate deaminase deficiency |
| 103000 | Hemolytic anemia due to adenylate kinase deficiency |
| 103050 | Autism, succinylpurinemic |
| 103050 | Adenylosuccinase deficiency |
| 103600 | [Dysalbuminemic hyperthyroxinemia] |
| 103600 | [Dysalbuminemic hyperzincemia], 194470 |
| 103600 | Analbuminemia |
| 103850 | Aldolase A deficiency |
| 104150 | [AFP deficiency, congenital] |
| 104150 | [Hereditary persistence of alpha-fetoprotein] |
| 104170 | NAGA deficiency, mild |
| 104170 | Schindler disease |
| 104170 | Kanzaki disease |
| 104311 | Alzheimer disease-3 |
| 104500 | Amelogenesis imperfecta-2, hypoplastic local type |
| 104770 | Amyloidosis, secondary, susceptibility to |
| 105580 | Anal canal carcinoma |
| 106165 | Hypertension, essential, 145500 |
| 106300 | Ankylosing spondylitis |
| 107280 | Cerebrovascular disease, occlusive |
| 107280 | Alpha-1-antichymotrypsin deficiency |
| 107300 | Antithrombin III deficiency |
| 107400 | Emphysema |
| 107400 | Emphysema-cirrhosis |
| 107470 | Atypical mycobacterial infection, familial disseminated, 209950 |
| 107470 | BCG infection, generalized familial |
| 107470 | Tuberculosis, susceptibility to |
| 107670 | Apolipoprotein A-II deficiency |
| 107741 | Hyperlipoproteinemia, type III |
| 107777 | Diabetes insipidus, nephrogenic, autosomal recessive, 222000 |
| 108725 | Atherosclerosis, susceptibility to |
| 108730 | Brody myopathy, 601003 |
| 108800 | Atrial septal defect, secundum type |
| 108962 | Hypertension, salt-resistant |
| 108985 | Atrophy areata |
| 109150 | Machado-Joseph disease |
| 109270 | Renal tubular acidosis, distal, 179800 |
| 109270 | Spherocytosis, hereditary |
| 109270 | [Acanthocytosis, one form] |
| 109270 | [Elliptocytosis, Malaysian-Melanesian type] |

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| 109270 | Hemolytic anemia due to band 3 defect |
| 109560 | Leukemia/lymphoma, B-cell, 3 |
| 109690 | Asthma, nocturnal, susceptibility to |
| 109690 | Obesity, susceptibility to |
| 109700 | Hemodialysis-related amyloidosis |
| 110700 | Vivax malaria, susceptibility to |
| 113705 | Ovarian cancer |
| 113705 | Breast cancer-1 |
| 113721 | Breast cancer |
| 113900 | Heart block, progressive familial, type I |
| 114208 | Malignant hyperthermia susceptibility 5, 601887 |
| 114208 | Hypokalemic periodic paralysis, 170400 |
| 114350 | Leukemia, acute myeloid |
| 114835 | Monocyte carboxyesterase deficiency |
| 115470 | Cat eye syndrome |
| 116800 | Cataract, Marner type |
| 116860 | Cavernous angiomatic malformations |
| 117700 | [Hypoceruloplasminemia, hereditary] |
| 117700 | Hemosiderosis, systemic, due to aceruloplasminemia |
| 118210 | Charcot-Marie-Tooth neuropathy-2A |
| 118485 | Polycystic ovary syndrome with hyperandrogenemia |
| 119300 | van der Woude syndrome |
| 120110 | Metaphyseal chondrodysplasia, Schmid type |
| 120215 | Ehlers-Danlos syndrome, type I, 130000 |
| 120215 | Ehlers-Danlos syndrome, type II, 130010 |
| 120220 | Bethlem myopathy, 158810 |
| 120240 | Bethlem myopathy, 158810 |
| 120260 | Epiphyseal dysplasia, multiple, type 2, 600204 |
| 120280 | Stickler syndrome, type III |
| 120280 | Marshall syndrome, 154780 |
| 120290 | OSMED syndrome, 215150 |
| 120290 | Stickler syndrome, type II, 184840 |
| 120435 | Muir-Torre syndrome, 158320 |
| 120435 | Colorectal cancer, hereditary, nonpolyposis, type 1 Ovarian cancer |
| 120550 | C1q deficiency, type A |
| 120570 | C1q deficiency, type B |
| 120575 | C1q deficiency, type C |
| 120620 | SLE susceptibility |
| 120620 | CR1 deficiency |
| 120700 | C3 deficiency |
| 120810 | C4 deficiency |
| 120820 | C4 deficiency |
| 120900 | C5 deficiency |
| 120920 | Measles, susceptibility to |
| 120940 | C9 deficiency |

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|--------|---|
| 120950 | C8 deficiency, type I |
| 120960 | C8 deficiency, type II |
| 121011 | Deafness, autosomal dominant 3, 601544 |
| 121011 | Deafness, autosomal recessive 1, 220290 |
| 121014 | Heterotaxia, visceroatrial, autosomal recessive |
| 121360 | Myeloid leukemia, acute, M4Eo subtype |
| 121700 | Congenital hereditary endothelial dystrophy of cornea |
| 121800 | Corneal dystrophy, crystalline, Schnyder |
| 122000 | Corneal dystrophy, posterior polymorphous |
| 122500 | [Transcortin deficiency] |
| 122560 | ACTH deficiency, 201400 |
| 122720 | Nicotine addiction, protection from |
| 122720 | Coumarin resistance, 122700 |
| 123000 | Craniometaphyseal dysplasia |
| 123101 | Craniosynostosis, type 2 |
| 123270 | [Creatine kinase, brain type, ectopic expression of] |
| 123580 | Cataract, congenital, autosomal dominant |
| 123620 | Cataract, cerulean, type 2, 601547 |
| 123829 | Melanoma |
| 123940 | White sponge nevus, 193900 |
| 124030 | Parkinsonism, susceptibility to |
| 124030 | Debrisquine sensitivity |
| 124200 | Darier disease (keratosis follicularis) |
| 125490 | Dentinogenesis imperfecta-1 |
| 125852 | Insulin-dependent diabetes mellitus-2 |
| 126060 | Anemia, megaloblastic, due to DHFR deficiency |
| 126340 | Xeroderma pigmentosum, group D, 278730 |
| 126391 | DNA ligase I deficiency |
| 126452 | Autonomic nervous system dysfunction |
| 126452 | [Novelty seeking personality] |
| 126600 | Drusen, radial, autosomal dominant |
| 126650 | Chloride diarrhea, congenital, Finnish type, 214700 |
| 126650 | Colon cancer |
| 129490 | Ectodermal dysplasia-3, anhidrotic |
| 129500 | Ectodermal dysplasia, hidrotic |
| 129900 | EEC syndrome-1 |
| 130410 | Glutaricaciduria, type IIB |
| 130500 | Elliptocytosis-1 |
| 130650 | Beckwith-Wiedemann syndrome |
| 131195 | Hereditary hemorrhagic telangiectasia-1, 187300 |
| 131210 | Atherosclerosis, susceptibility to |
| 131400 | Eosinophilia, familial |
| 132700 | Cylindromatosis |
| 133170 | Erythremia |
| 133171 | [Erythrocytosis, familial], 133100 |
| 133200 | Erythrokeratoderma variabilis |

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| 133780 | Vitreoretinopathy, exudative, familial |
| 134370 | Factor H deficiency |
| 134370 | Hemolytic-uremic syndrome, 235400 |
| 134370 | Membranoproliferative glomerulonephritis |
| 134570 | Factor XIII A deficiency |
| 134580 | Factor XIII B deficiency |
| 134790 | Hyperferritinemia-cataract syndrome, 600886 |
| 135300 | Fibromatosis, gingival |
| 135940 | Ichthyosis vulgaris, 146700 |
| 136132 | [Fish-odor syndrome], 602079 |
| 136435 | Ovarian dysgenesis, hypergonadotropic, with normal karyotype, 233300 |
| 136550 | Macular dystrophy, North Carolina type |
| 136836 | Fucosyltransferase-6 deficiency |
| 137600 | Iridogoniodysgenesis syndrome |
| 138079 | Hyperinsulinism, familial, 602485 |
| 138079 | MODY, type 2, 125851 |
| 138140 | Glucose transport defect, blood-brain barrier |
| 138190 | Diabetes mellitus, noninsulin-dependent |
| 138491 | Startle disease, autosomal recessive |
| 138491 | Startle disease/hyperekplexia, autosomal dominant, 149400 |
| 138491 | Hyperekplexia and spastic paraparesis |
| 138570 | Non-insulin dependent diabetes mellitus, susceptibility to |
| 138971 | Kostmann neutropenia, 202700 |
| 138981 | Pulmonary alveolar proteinosis, 265120 |
| 139190 | Gigantism due to GHRF hypersecretion |
| 139190 | Isolated growth hormone deficiency due to defect in GHRF |
| 139191 | Growth hormone deficient dwarfism |
| 139330 | Night blindness, congenital stationary |
| 139350 | Epidermolytic hyperkeratosis, 113800 |
| 139350 | Keratoderma, palmoplantar, nonepidermolytic |
| 139360 | Pituitary ACTH-secreting adenoma |
| 140100 | [Anhaptoglobinemia] |
| 140100 | [Hypohaptoglobinemia] |
| 141900 | Methemoglobinemias, beta- |
| 141900 | Sickle cell anemia |
| 141900 | Thalassemias, beta- |
| 141900 | Erythremias, beta- |
| 141900 | HPFH, deletion type |
| 141900 | Heinz body anemias, beta- |
| 142000 | Thalassemia due to Hb Lepore |
| 142000 | Thalassemia, delta- |
| 142200 | HPFH, nondeletion type A |
| 142250 | HPFH, nondeletion type G |
| 142270 | Hereditary persistence of fetal hemoglobin |
| 142360 | Thrombophilia due to heparin cofactor II deficiency |

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| 142470 | [Hereditary persistence of fetal hemoglobin, heterocellular] |
| 142857 | Pemphigoid, susceptibility to |
| 142858 | Beryllium disease, chronic, susceptibility to |
| 142959 | Hand-foot-uterus syndrome, 140000 |
| 143200 | Wagner syndrome |
| 143200 | Erosive vitreoretinopathy |
| 143890 | Hypercholesterolemia, familial |
| 144200 | Epidermolytic palmoplantar keratoderma |
| 145001 | Hyperparathyroidism-jaw tumor syndrome |
| 145260 | Pseudohypoaldosteronism, type II |
| 145981 | Hypocalciuric hypercalcemia, type II |
| 146760 | [IgG receptor I, phagocytic, familial deficiency of] |
| 146790 | Lupus nephritis, susceptibility to |
| 147061 | Allergy and asthma susceptibility |
| 147141 | Leukemia, acute lymphoblastic |
| 147280 | Hepatocellular carcinoma |
| 147440 | Growth retardation with deafness and mental retardation |
| 147557 | Epidermolysis bullosa, junctional, with pyloric atresia, 226730 |
| 147570 | Interferon, immune, deficiency |
| 147575 | Myelodysplastic syndrome, preleukemic |
| 147575 | Myelogenous leukemia, acute |
| 147575 | Macrocytic anemia refractory, of 5q- syndrome, 153550 |
| 147781 | Atopy, susceptibility to |
| 148040 | Epidermolysis bullosa simplex, Koebner, Dowling-Meara, and Weber-Cockayne types, 131900, 131760, 131800 |
| 148041 | Pachyonychia congenita, Jadassohn-Lewandowsky type, 167200 |
| 148043 | Meesmann corneal dystrophy, 122100 |
| 148065 | White sponge nevus, 193900 |
| 148066 | Epidermolysis bullosa simplex, Koebner, Dowling-Meara, and Weber-Cockayne types, 131900, 131760, 131800 |
| 148066 | Epidermolysis bullosa simplex, recessive, 601001 |
| 148067 | Nonepidermolytic palmoplantar keratoderma, 600962 |
| 148067 | Pachyonychia congenita, Jadassohn-Lewandowsky type, 167200 |
| 148069 | Pachyonychia congenita, Jackson-Lawler type, 167210 |
| 148070 | Liver disease, susceptibility to, from hepatotoxins or viruses |
| 148080 | Epidermolytic hyperkeratosis, 113800 |
| 148900 | Klippel-Feil syndrome with laryngeal malformation |
| 150000 | Exertional myoglobinuria due to deficiency of LDH-A |
| 150210 | Lactoferrin-deficient neutrophils, 245480 |
| 150240 | Cutis laxa, marfanoid neonatal type |
| 150250 | Larsen syndrome, autosomal dominant |
| 150270 | Laryngeal adductor paralysis |
| 150292 | Epidermolysis bullosa, Herlitz junctional type, 226700 |
| 150310 | Epidermolysis bullosa, Herlitz junctional type, 226700 |
| 150310 | Epidermolysis bullosa, generalized atrophic benign, 226650 |
| 151385 | Leukemia, acute myeloid |

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| 151410 | Leukemia, chronic myeloid |
| 151440 | Leukemia, T-cell acute lymphoblastoid |
| 151670 | Hepatic lipase deficiency |
| 152200 | Coronary artery disease, susceptibility to |
| 152445 | Vohwinkel syndrome, 124500 |
| 152445 | Erythrokeratoderma, progressive symmetric, 602036 |
| 152760 | Hypogonadotropic hypogonadism due to GNRH deficiency, 227200 |
| 152780 | Hypogonadism, hypergonadotropic |
| 152780 | Male pseudohermaphroditism due to defective LH |
| 152790 | Precocious puberty, male, 176410 |
| 152790 | Leydig cell hypoplasia |
| 153455 | Cutis laxa, recessive, type I, 219100 |
| 153880 | Macular dystrophy, dominant cystoid |
| 154275 | Malignant hyperthermia susceptibility 2 |
| 154276 | Malignant hyperthermia susceptibility 3 |
| 154500 | Treacher Collins mandibulofacial dysostosis |
| 154550 | Carbohydrate-deficient glycoprotein syndrome, type Ib, 602579 |
| 156225 | Muscular dystrophy, congenital merosin-deficient |
| 157170 | Holoprosencephaly-2 |
| 157640 | PEO with mitochondrial DNA deletions, type 1 |
| 159000 | Muscular dystrophy, limb-girdle, type 1A |
| 159001 | Muscular dystrophy, limb-girdle, type 1B |
| 159440 | Charcot-Marie-Tooth neuropathy-1B, 118200 |
| 159440 | Dejerine-Sottas disease, myelin P-related, 145900 |
| 159440 | Hypomyelination, congenital |
| 160781 | Cardiomyopathy, hypertrophic, mid-left ventricular chamber type |
| 160900 | Myotonic dystrophy |
| 162200 | Neurofibromatosis, type 1 |
| 162200 | Watson syndrome, 193520 |
| 164040 | Leukemia, acute promyelocytic, NPM/RARA type |
| 164200 | Oculodentodigital dysplasia |
| 164200 | Syndactyly, type III, 186100 |
| 164500 | Spinocerebellar ataxia-7 |
| 164731 | Ovarian carcinoma, 167000 |
| 164860 | Renal cell carcinoma, papillary, familial and sporadic |
| 164953 | Liposarcoma |
| 165215 | 3q21q26 syndrome |
| 165500 | Optic atrophy 1 |
| 166600 | Osteopetrosis, AD, type II |
| 166800 | Otosclerosis |
| 167000 | Ovarian cancer, serous |
| 167250 | Paget disease of bone |
| 167409 | Optic nerve coloboma with renal disease, 120330 |
| 167415 | Hypothyroidism, congenital, due to thyroid dysgenesis or hypoplasia |

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| 168360 | Paraneoplastic sensory neuropathy |
| 168468 | Metaphyseal chondrodysplasia, Murk Jansen type, 156400 |
| 168610 | Parkinsonism-dementia with pallidopontonigral degeneration |
| 169600 | Hailey-Hailey disease |
| 170261 | Bare lymphocyte syndrome, type I, due to TAP2 deficiency |
| 170650 | Periodontitis, juvenile |
| 170995 | Zellweger syndrome-2 |
| 171190 | Hypertension, essential, 145500 |
| 171760 | Hypophosphatasia, adult, 146300 |
| 171760 | Hypophosphatasia, infantile, 241500 |
| 171860 | Hemolytic anemia due to phosphofructokinase deficiency |
| 172400 | Hemolytic anemia due to glucosephosphate isomerase deficiency |
| 172400 | Hydrops fetalis, one form |
| 172411 | Colorectal cancer, resistance to |
| 172471 | Glycogenosis, hepatic, autosomal |
| 172490 | Phosphorylase kinase deficiency of liver and muscle, 261750 |
| 173350 | Plasminogen Tochigi disease |
| 173350 | Plasminogen deficiency, types I and II |
| 173350 | Thrombophilia, dysplasminogenemic |
| 173360 | Thrombophilia due to excessive plasminogen activator inhibitor |
| 173360 | Hemorrhagic diathesis due to PAI1 deficiency |
| 173610 | Platelet alpha/delta storage pool deficiency |
| 173850 | Polio, susceptibility to |
| 174000 | Medullary cystic kidney disease, AD |
| 174900 | Polyposis, juvenile intestinal |
| 176000 | Porphyria, acute intermittent |
| 176100 | Porphyria cutanea tarda |
| 176100 | Porphyria, hepatocerebral |
| 176705 | Breast cancer, sporadic |
| 176730 | Diabetes mellitus, rare form |
| 176730 | Hyperproinsulinemia, familial |
| 176730 | MODY, one form |
| 176830 | Obesity, adrenal insufficiency, and red hair |
| 176830 | ACTH deficiency |
| 176860 | Purpura fulminans, neonatal |
| 176860 | Thrombophilia due to protein C deficiency |
| 176943 | Apert syndrome, 101200 |
| 176943 | Pfeiffer syndrome, 101600 |
| 176943 | Beare-Stevenson cutis gyrata syndrome, 123790 |
| 176943 | Crouzon craniofacial dysostosis, 123500 |
| 176943 | Jackson-Weiss syndrome, 123150 |
| 176947 | Selective T-cell defect |
| 177070 | Spherocytosis, hereditary, Japanese type |
| 177070 | Hermansky-Pudlak syndrome, 203300 |
| 177900 | Psoriasis susceptibility-1 |
| 178300 | Ptosis, hereditary congenital, 1 |

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| 178640 | Pulmonary alveolar proteinosis, congenital, 265120 |
| 179450 | Ragweed sensitivity |
| 179755 | Renal cell carcinoma, papillary, 1 |
| 179820 | [Hyperproreninemia] |
| 180020 | Retinal cone dystrophy-1 |
| 180071 | Retinitis pigmentosa, autosomal recessive |
| 180100 | Retinitis pigmentosa-1 |
| 180104 | Retinitis pigmentosa-9 |
| 180105 | Retinitis pigmentosa-10 |
| 180250 | Retinol binding protein, deficiency of |
| 180297 | Anemia, hemolytic, Rh-null, suppressor type, 268150 |
| 180380 | Night blindness, congenital stationary, rhodopsin-related |
| 180380 | Retinitis pigmentosa, autosomal recessive |
| 180380 | Retinitis pigmentosa-4, autosomal dominant |
| 180901 | Malignant hyperthermia susceptibility 1, 145600 |
| 180901 | Central core disease, 117000 |
| 181405 | Scapuloperoneal spinal muscular atrophy, New England type |
| 181430 | Scapuloperoneal syndrome, myopathic type |
| 181460 | Schistosoma mansoni, susceptibility/resistance to |
| 181510 | Schizophrenia |
| 182138 | Anxiety-related personality traits |
| 182280 | Small-cell cancer of lung |
| 182380 | Glucose/galactose malabsorption |
| 182381 | Renal glucosuria, 253100 |
| 182500 | Cataract, congenital |
| 182600 | Spastic paraplegia-3A |
| 182601 | Spastic paraplegia-4 |
| 182860 | Pyropoikilocytosis |
| 182860 | Spherocytosis, recessive |
| 182860 | Elliptocytosis-2 |
| 185000 | Stomatocytosis I |
| 185430 | Atherosclerosis, susceptibility to |
| 185470 | Myopathy due to succinate dehydrogenase deficiency |
| 185800 | Symphalangism, proximal |
| 186580 | Arthrocutaneouveal granulomatosis |
| 186770 | Leukemia, T-cell acute lymphocytic |
| 186780 | CD3, zeta chain, deficiency |
| 186880 | Leukemia/lymphoma, T-cell |
| 186921 | Leukemia, T-cell acute lymphoblastic |
| 186960 | Leukemia/lymphoma, T-cell |
| 187040 | Leukemia-1, T-cell acute lymphoblastic |
| 188040 | Thrombophilia due to thrombomodulin defect |
| 188070 | Bleeding disorder due to defective thromboxane A2 receptor |
| 188400 | Velocardiofacial syndrome, 192430 |
| 188400 | DiGeorge syndrome |
| 188826 | Sorsby fundus dystrophy, 136900 |

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| 189800 | Preeclampsia/eclampsia |
| 189980 | Leukemia, chronic myeloid |
| 190000 | Atransferrinemia |
| 190020 | Bladder cancer, 109800 |
| 190040 | Dermatofibrosarcoma protuberans |
| 190040 | Giant-cell fibroblastoma |
| 190040 | Meningioma, SIS-related |
| 190100 | Geniospasm |
| 190195 | Ichthyosiform erythroderma, congenital, 242100 |
| 190195 | Ichthyosis, lamellar, autosomal recessive, 242300 |
| 190198 | Leukemia, T-cell acute lymphoblastic |
| 190685 | Down syndrome |
| 190900 | Colorblindness, tritan |
| 191030 | Nemaline myopathy-1, 161800 |
| 191044 | Cardiomyopathy, familial hypertrophic |
| 191045 | Cardiomyopathy, familial hypertrophic, 2, 115195 |
| 191290 | Segawa syndrome, recessive |
| 191315 | Insensitivity to pain, congenital, with anhidrosis, 256800 |
| 192090 | Ovarian carcinoma |
| 192090 | Breast cancer, lobular |
| 192090 | Endometrial carcinoma |
| 192090 | Gastric cancer, familial, 137215 |
| 192500 | Jervell and Lange-Nielsen syndrome, 220400 |
| 192500 | Long QT syndrome-1 |
| 194071 | Wilms tumor, type 2 |
| 194071 | Adrenocortical carcinoma, hereditary, 202300 |
| 200150 | Choreoacanthocytosis |
| 200350 | Acetyl-CoA carboxylase deficiency |
| 201470 | Acyl-CoA dehydrogenase, short-chain, deficiency of |
| 201910 | Adrenal hyperplasia, congenital, due to 21-hydroxylase deficiency |
| 202200 | Glucocorticoid deficiency, due to ACTH unresponsiveness |
| 203310 | Ocular albinism, autosomal recessive |
| 203500 | Alkaptonuria |
| 204500 | Ceroid-lipofuscinosis, neuronal 2, classic late infantile |
| 205900 | Anemia, Diamond-Blackfan |
| 207750 | Hyperlipoproteinemia, type Ib |
| 207800 | Argininemia |
| 208100 | Arthrogryposis multiplex congenita, neurogenic |
| 208250 | Jacobs syndrome |
| 210900 | Bloom syndrome |
| 214400 | Charcot-Marie-Tooth neuropathy-4A |
| 216550 | Cohen syndrome |
| 216900 | Achromatopsia |
| 217000 | C2 deficiency |
| 217030 | C3b inactivator deficiency |

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| 217050 | C6 deficiency |
| 217050 | Combined C6/C7 deficiency |
| 217070 | C7 deficiency |
| 217095 | Conotruncal cardiac anomalies |
| 217300 | Cornea plana congenita, recessive |
| 217800 | Macular corneal dystrophy |
| 218000 | Andermann syndrome |
| 218030 | Apparent mineralocorticoid excess, hypertension due to |
| 221770 | Polycystic lipomembranous osteodysplasia with sclerosing leukencephalopathy |
| 221820 | Gliosis, familial progressive subcortical |
| 222100 | Diabetes mellitus, insulin-dependent-1 |
| 222600 | Atelosteogenesis II, 256050 |
| 222600 | Achondrogenesis Ib, 600972 |
| 222600 | Diastrophic dysplasia |
| 222700 | Lysinuric protein intolerance |
| 222800 | Hemolytic anemia due to bisphosphoglycerate mutase deficiency |
| 222900 | Sucrose intolerance |
| 223900 | Dysautonomia, familial |
| 224100 | Congenital dyserythropoietic anemia II |
| 225500 | Ellis-van Creveld syndrome |
| 227220 | [Eye color, brown] |
| 227646 | Fanconi anemia, type D |
| 229300 | Friedreich ataxia |
| 229300 | Friedreich ataxia with retained reflexes |
| 229600 | Fructose intolerance |
| 229800 | [Fructosuria] |
| 230000 | Fucosidosis |
| 230350 | Galactose epimerase deficiency |
| 230400 | Galactosemia |
| 230800 | Gaucher disease |
| 230800 | Gaucher disease with cardiovascular calcification |
| 231550 | Achalasia-addisonianism-alacrimia syndrome |
| 231680 | Glutaricaciduria, type IIA |
| 232050 | Propionicacidemia, type II or pccB type |
| 232200 | Glycogen storage disease I |
| 232400 | Glycogen storage disease IIIa |
| 232400 | Glycogen storage disease IIIb |
| 233100 | [Renal glucosuria] |
| 233710 | Chronic granulomatous disease due to deficiency of NCF-2 |
| 234000 | Factor XII deficiency |
| 235200 | Hemochromatosis |
| 235800 | [Histidinemia] |
| 236100 | Holoprosencephaly-1 |
| 236200 | Homocystinuria, B6-responsive and nonresponsive types |
| 236730 | Urofacial syndrome |

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| 238310 | Hyperglycinemia, nonketotic, type II |
| 239100 | Van Buchem disease |
| 240300 | Autoimmune polyglandular disease, type I |
| 243500 | Isovalericacidemia |
| 245050 | Ketoacidosis due to SCOT deficiency |
| 245200 | Krabbe disease |
| 245900 | Norum disease |
| 245900 | Fish-eye disease |
| 246450 | HMG-CoA lyase deficiency |
| 246530 | Leukotriene C4 synthase deficiency |
| 246900 | Lipoamide dehydrogenase deficiency |
| 247200 | Miller-Dieker lissencephaly syndrome |
| 248510 | Mannosidosis, beta- |
| 248600 | Maple syrup urine disease, type Ia |
| 248611 | Maple syrup urine disease, type Ib |
| 249000 | Meckel syndrome |
| 250100 | Metachromatic leukodystrophy |
| 250250 | Cartilage-hair hypoplasia |
| 250800 | Methemoglobinemia, type I |
| 250800 | Methemoglobinemia, type II |
| 251000 | Methylmalonicaciduria, mutase deficiency type |
| 251600 | Microphthalmia, autosomal recessive |
| 252920 | Sanfilippo syndrome, type B |
| 252940 | Sanfilippo syndrome, type D |
| 253200 | Maroteaux-Lamy syndrome, several forms |
| 253250 | Mulibrey nanism |
| 253700 | Muscular dystrophy, limb-girdle, type 2C |
| 253800 | Walker-Warburg syndrome, 236670 |
| 253800 | Fukuyama type congenital muscular dystrophy |
| 254210 | Myasthenia gravis, familial infantile |
| 255800 | Schwartz-Jampel syndrome |
| 256100 | Nephronophthisis, juvenile |
| 256540 | Galactosialidosis |
| 256550 | Sialidosis, type I |
| 256550 | Sialidosis, type II |
| 257200 | Niemann-Pick disease, type A |
| 257200 | Niemann-Pick disease, type B |
| 258501 | 3-methylglutaconicaciduria, type III |
| 258870 | Gyrate atrophy of choroid and retina with ornithinemia, B6 responsive or unresponsive |
| 261510 | Pseudo-Zellweger syndrome |
| 261600 | Phenylketonuria |
| 261600 | [Hyperphenylalaninemia, mild] |
| 261640 | Phenylketonuria due to PTS deficiency |
| 263200 | Polycystic kidney disease, autosomal recessive |
| 263700 | Porphyria, congenital erythropoietic |

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| 264300 | Pseudohermaphroditism, male, with gynecomastia |
| 264700 | Pseudo-vitamin D dependency rickets 1 |
| 266200 | Anemia, hemolytic, due to PK deficiency |
| 266600 | Inflammatory bowel disease-1 |
| 267750 | Knobloch syndrome |
| 268800 | Sandhoff disease, infantile, juvenile, and adult forms |
| 268800 | Spinal muscular atrophy, HEXB-related |
| 269920 | Salla disease |
| 270100 | Situs inversus viscerum |
| 271245 | Spinocerebellar ataxia-8, infantile, with sensory neuropathy |
| 271900 | Canavan disease |
| 272750 | GM2-gangliosidosis, AB variant |
| 272800 | Tay-Sachs disease |
| 272800 | [Hex A pseudodeficiency] |
| 272800 | GM2-gangliosidosis, juvenile, adult |
| 273300 | Male germ cell tumor |
| 274600 | Pendred syndrome |
| 274600 | Deafness, autosomal recessive 4 |
| 276600 | Tyrosinemia, type II |
| 276700 | Tyrosinemia, type I |
| 276900 | Usher syndrome, type 1A |
| 276902 | Usher syndrome, type 3 |
| 278000 | Wolman disease |
| 278000 | Cholesteryl ester storage disease |
| 278300 | Xanthinuria, type I |
| 278760 | Xeroderma pigmentosum, group F |
| 300031 | Mental retardation, X-linked, FRAXF type |
| 300044 | Wernicke-Korsakoff syndrome, susceptibility to |
| 300048 | Intestinal pseudoobstruction, neuronal, X-linked |
| 300049 | Nodular heterotopia, bilateral periventricular |
| 300049 | BPNH/MR syndrome |
| 300055 | Mental retardation with psychosis, pyramidal signs, and macroorchidism |
| 300100 | Adrenoleukodystrophy |
| 300100 | Adrenomyeloneuropathy |
| 300104 | Mental retardation, X-linked nonspecific, 309541 |
| 300126 | Dyskeratosis congenita-1, 305000 |
| 301201 | Amelogenesis imperfecta-3, hypoplastic type |
| 301220 | Partington syndrome II |
| 301590 | Anophthalmos-1 |
| 302060 | Noncompaction of left ventricular myocardium, isolated |
| 302060 | Barth syndrome |
| 302060 | Cardiomyopathy, X-linked dilated, 300069 |
| 302060 | Endocardial fibroelastosis-2 |
| 302350 | Nance-Horan syndrome |
| 302960 | Chondrodysplasia punctata, X-linked dominant |

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| 303700 | Colorblindness, blue monochromatic |
| 303800 | Colorblindness, deutan |
| 303900 | Colorblindness, protan |
| 304040 | Charcot-Marie-Tooth neuropathy, X-linked-1, dominant, 302800 |
| 304800 | Diabetes insipidus, nephrogenic |
| 305100 | Anhidrotic ectodermal dysplasia |
| 305450 | FG syndrome |
| 305900 | Favism |
| 305900 | G6PD deficiency |
| 305900 | Hemolytic anemia due to G6PD deficiency |
| 306400 | Chronic granulomatous disease, X-linked |
| 306700 | Hemophilia A |
| 306995 | [Homosexuality, male] |
| 308310 | Incontinentia pigmenti, familial |
| 308840 | Spastic paraplegia, 312900 |
| 308840 | Hydrocephalus due to aqueductal stenosis, 307000 |
| 308840 | MASA syndrome, 303350 |
| 309200 | Manic-depressive illness, X-linked |
| 309470 | Mental retardation, X-linked, syndromic-3, with spastic diplegia |
| 309548 | Mental retardation, X-linked, FRAXE type |
| 309585 | Mental retardation, X-linked, syndromic-6, with gynecomastia and obesity |
| 309600 | Allan-Herndon syndrome |
| 309605 | Mental retardation, X-linked, syndromic-4, with congenital contractures and low fingertip arches |
| 309620 | Mental retardation-skeletal dysplasia |
| 309900 | Mucopolysaccharidosis II |
| 310300 | Emery-Dreifuss muscular dystrophy |
| 310400 | Myotubular myopathy, X-linked |
| 310460 | Myopia-1 |
| 310460 | Bornholm eye disease |
| 311250 | Ornithine transcarbamylase deficiency |
| 311300 | Otopalatodigital syndrome, type I |
| 311360 | Ovarian failure, premature |
| 311510 | Waisman parkinsonism-mental retardation syndrome |
| 312040 | N syndrome, 310465 |
| 312610 | Retinitis pigmentosa-3 |
| 312760 | Turner syndrome |
| 314250 | Dystonia-3, torsion, with parkinsonism, Filipino type |
| 314300 | Goeminne TKCR syndrome |
| 314400 | Cardiac valvular dysplasia-1 |
| 314580 | Wieacker-Wolff syndrome |
| 314850 | McLeod phenotype |
| 400003 | Sertoli-cell-only syndrome |
| 415000 | Sertoli-cell-only syndrome |
| 600020 | Prostate cancer, 176807 |

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| 600040 | Colorectal cancer |
| 600049 | Myelodysplasia syndrome-1 |
| 600059 | Retinitis pigmentosa-13 |
| 600065 | Leukocyte adhesion deficiency, 116920 |
| 600095 | Split hand/foot malformation, type 3 |
| 600101 | Deafness, autosomal dominant 2 |
| 600105 | Retinitis pigmentosa-12, autosomal recessive |
| 600119 | Muscular dystrophy, Duchenne-like, type 2 |
| 600119 | Adhalinopathy, primary |
| 600138 | Retinitis pigmentosa-11 |
| 600163 | Long QT syndrome-3 |
| 600173 | SCID, autosomal recessive, T-negative/B-positive type |
| 600175 | Spinal muscular atrophy, congenital nonprogressive, of lower limbs |
| 600179 | Leber congenital amaurosis, type I, 204000 |
| 600184 | Carnitine acetyltransferase deficiency |
| 600194 | Ichthyosis bullous of Siemens, 146800 |
| 600202 | Dyslexia, specific, 2 |
| 600211 | Cleidocranial dysplasia, 119600 |
| 600223 | Spinocerebellar ataxia-4 |
| 600231 | Palmoplantar keratoderma, Bothnia type |
| 600243 | Temperature-sensitive apoptosis |
| 600261 | Ehlers-Danlos-like syndrome |
| 600276 | Cerebral arteriopathy with subcortical infarcts and leukoencephalopathy, 125310 |
| 600281 | Non-insulin-dependent diabetes mellitus, 125853 |
| 600281 | MODY, type 1, 125850 |
| 600309 | Atrioventricular canal defect-1 |
| 600310 | Pseudoachondroplasia, 177170 |
| 600310 | Epiphyseal dysplasia, multiple 1, 132400 |
| 600320 | Insulin-dependent diabetes mellitus-5 |
| 600334 | Tibial muscular dystrophy |
| 600354 | Spinal muscular atrophy-1, 253300 |
| 600354 | Spinal muscular atrophy-2, 253550 |
| 600354 | Spinal muscular atrophy-3, 253400 |
| 600374 | Bardet-Biedl syndrome 4 |
| 600429 | [Ii blood group, 110800] |
| 600512 | Epilepsy, partial |
| 600536 | Myopathy, congenital |
| 600542 | Chondrosarcoma, extraskeletal myxoid |
| 600584 | Atrial septal defect with atrioventricular conduction defects, 108900 |
| 600593 | Craniosynostosis, Adelaide type |
| 600650 | Myopathy due to CPT II deficiency, 255110 |
| 600650 | CPT deficiency, hepatic, type II, 600649 |
| 600652 | Deafness, autosomal dominant 4 |

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| 600698 | Salivary adenoma |
| 600698 | Uterine leiomyoma |
| 600698 | Lipoma |
| 600698 | Lipomatosis, mutiple, 151900 |
| 600701 | Lipoma |
| 600722 | Ceroid lipofuscinosis, neuronal, variant juvenile type, with granular osmophilic deposits |
| 600722 | Ceroid lipofuscinosis, neuronal-1, infantile, 256730 |
| 600757 | Orofacial cleft-3 |
| 600759 | Alzheimer disease-4 |
| 600760 | Pseudohypoaldosteronism, type I, 264350 |
| 600760 | Liddle syndrome, 177200 |
| 600761 | Pseudohypoaldosteronism, type I, 264350 |
| 600761 | Liddle syndrome, 177200 |
| 600807 | Bronchial asthma |
| 600808 | Enuresis, nocturnal, 2 |
| 600837 | Hirschsprung disease, 142623 |
| 600839 | Bartter syndrome, 241200 |
| 600850 | Schizophrenia disorder-4 |
| 600856 | Beckwith-Wiedemann syndrome, 130650 |
| 600881 | Cataract, congenital, zonular, with sutural opacities |
| 600882 | Charcot-Marie-Tooth neuropathy-2B |
| 600883 | Diabetes mellitus, insulin-dependent, 8 |
| 600884 | Cardiomyopathy, familial dilated 1B |
| 600887 | Endometrial carcinoma |
| 600897 | Cataract, zonular pulverulent-1, 116200 |
| 600899 | Severe combined immunodeficiency, type I, 202500 |
| 600918 | Cystinuria, type III |
| 600919 | Long QT syndrome-4 with sinus bradycardia |
| 600923 | Porphyria variegata, 176200 |
| 600946 | Short stature, autosomal dominant, with normal serum growth hormone binding protein |
| 600946 | Short stature, idiopathic |
| 600946 | Laron dwarfism, 262500 |
| 600956 | Persistent Mullerian duct syndrome, type II, 261550 |
| 600957 | Persistent Mullerian duct syndrome, type I, 261550 |
| 600968 | Gitelman syndrome, 263800 |
| 600971 | Deafness, autosomal recessive 6 |
| 600974 | Deafness, autosomal recessive 7 |
| 600977 | Cone dystrophy, progressive |
| 600994 | Deafness, autosomal dominant 5 |
| 600995 | Nephrotic syndrome, idiopathic, steroid-resistant |
| 600998 | Bleeding diathesis due to GNAQ deficiency |
| 601002 | 5-oxoprolinuria, 266130 |
| 601002 | Hemolytic anemia due to glutathione synthetase deficiency, 231900 |

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| 601071 | Deafness, autosomal recessive 9 |
| 601072 | Deafness, autosomal recessive 8 |
| 601105 | Pycnodynostosis, 265800 |
| 601107 | Dubin-Johnson syndrome, 237500 |
| 601130 | Tolbutamide poor metabolizer |
| 601145 | Epilepsy, progressive myoclonic 1, 254800 |
| 601146 | Brachydactyly, type C, 113100 |
| 601146 | Acromesomelic dysplasia, Hunter-Thompson type, 201250 |
| 601146 | Chondrodysplasia, Grebe type, 200700 |
| 601154 | Cardiomyopathy, dilated, 1E |
| 601199 | Neonatal hyperparathyroidism, 239200 |
| 601199 | Hypocalcemia, autosomal dominant, 601198 |
| 601199 | Hypocalciuric hypercalcemia, type I, 145980 |
| 601202 | Cataract, anterior polar-2 |
| 601208 | Insulin-dependent diabetes mellitus-11 |
| 601226 | Progressive external ophthalmoplegia, type 2 |
| 601238 | Cerebellar ataxia, Cayman type |
| 601267 | HIV infection, susceptibility/resistance to |
| 601284 | Hereditary hemorrhagic telangiectasia-2, 600376 |
| 601313 | Polycystic kidney disease, adult type I, 173900 |
| 601316 | Deafness, autosomal dominant 10 |
| 601363 | Wilms tumor, type 4 |
| 601373 | HIV infection, susceptibility/resistance to |
| 601402 | Leukemia, myeloid, acute |
| 601406 | B-cell non-Hodgkin lymphoma, high-grade |
| 601410 | Diabetes mellitus, transient neonatal |
| 601411 | Muscular dystrophy, limb-girdle, type 2F, 601287 |
| 601412 | Deafness, autosomal dominant 7 |
| 601414 | Retinitis pigmentosa-18 |
| 601471 | Moebius syndrome-2 |
| 601493 | Cardiomyopathy, dilated 1C |
| 601494 | Cardiomyopathy, familial, dilated-2 |
| 601518 | Prostate cancer, hereditary, 1, 176807 |
| 601542 | Rieger syndrome, type 1, 180500 |
| 601545 | Lissencephaly-1 |
| 601596 | Charcot-Marie-Tooth neuropathy, demyelinating |
| 601604 | Mycobacterial and salmonella infections, susceptibility to |
| 601607 | Rhabdoid tumors |
| 601620 | Holt-Oram syndrome, 142900 |
| 601621 | Ulnar-mammary syndrome, 181450 |
| 601649 | Blepharophimosis, epicanthus inversus, and ptosis, type 2 |
| 601652 | Glaucoma 1A, primary open angle, juvenile-onset, 137750 |
| 601669 | Hirschsprung disease, one form |
| 601680 | Distal arthrogryposis, type 2B |
| 601682 | Glaucoma 1C, primary open angle |
| 601690 | Platelet-activating factor acetylhydrolase deficiency |

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| 601691 | Retinitis pigmentosa-19, 601718 |
| 601691 | Stargardt disease-1, 248200 |
| 601691 | Cone-rod dystrophy 3 |
| 601691 | Fundus flavimaculatus with macular dystrophy, 248200 |
| 601718 | Retinitis pigmentosa-19 |
| 601757 | Rhizomelic chondrodyplasia punctata, type 1, 215100 |
| 601769 | Osteoporosis, involutional |
| 601769 | Rickets, vitamin D-resistant, 277440 |
| 601771 | Glaucoma 3A, primary infantile, 231300 |
| 601777 | Cone dystrophy, progressive |
| 601780 | Ceroid-lipofuscinosis, neuronal-6, variant late infantile |
| 601800 | [Hair color, brown] |
| 601841 | Protein C inhibitor deficiency |
| 601843 | Hypothyroidism, congenital, 274400 |
| 601844 | Pseudohypoaldosteronism type II |
| 601846 | Muscular dystrophy with rimmed vacuoles |
| 601863 | Bare lymphocyte syndrome, complementation group C |
| 601868 | Deafness, autosomal dominant 13 |
| 601885 | Cataract, zonular pulverulent-2 |
| 601916 | Pancreatic cancer |
| 601928 | Monilethrix, 158000 |
| 601954 | Muscular dystrophy, limb-girdle, type 2G |
| 601969 | Glioblastoma multiforme, 137800 |
| 601969 | Medulloblastoma, 155255 |
| 601975 | Ectodermal dysplasia/skin fragility syndrome |
| 602014 | Hypomagnesemia with secondary hypocalcemia |
| 602066 | Convulsions, infantile and paroxysmal choreoathetosis |
| 602067 | Cardiomyopathy, dilated, 1F |
| 602081 | Speech-language disorder-1 |
| 602082 | Corneal dystrophy, Thiel-Behnke type |
| 602084 | Endometrial carcinoma |
| 602088 | Nephronophthisis, infantile |
| 602089 | Hemangioma, capillary, hereditary |
| 602092 | Deafness, autosomal recessive 18 |
| 602094 | Lipodystrophy, familial partial |
| 602116 | Glioma |
| 602134 | Tremor, familial essential, 2 |
| 602136 | Refsum disease, infantile, 266510 |
| 602136 | Zellweger syndrome-1, 214100 |
| 602136 | Adrenoleukodystrophy, neonatal, 202370 |
| 602153 | Monilethrix, 158000 |
| 602216 | Peutz-Jeghers syndrome, 175200 |
| 602221 | Stem-cell leukemia/lymphoma syndrome |
| 602225 | Cone-rod retinal dystrophy-2, 120970 |
| 602225 | Leber congenital amaurosis, type III |
| 602279 | Oculopharyngeal muscular dystrophy, 164300 |

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| 602279 | Oculopharyngeal muscular dystrophy, autosomal recessive, 257950 |
| 602280 | Retinitis pigmentosa-14, 600132 |
| 602363 | Ellis-van Creveld-like syndrome |
| 602403 | Alzheimer disease, susceptibility to |
| 602421 | Sweat chloride elevation without CF |
| 602421 | Congenital bilateral absence of vas deferens, 277180 |
| 602421 | Cystic fibrosis, 219700 |
| 602447 | Coronary artery disease, susceptibility to |
| 602475 | Ossification of posterior longitudinal ligament of spine |
| 602476 | Febrile convulsions, familial, 1 |
| 602477 | Febrile convulsions, familial, 2 |
| 602491 | Hyperlipidemia, familial combined, 1 |
| 602544 | Parkinson disease, juvenile, type 2, 600116 |
| 602568 | Homocystinuria-megaloblastic anemia, cbl E type, 236270 |
| 602574 | Deafness, autosomal dominant 12, 601842 |
| 602574 | Deafness, autosomal dominant 8, 601543 |
| 602575 | Nail-patella syndrome with open-angle glaucoma, 137750 |
| 602575 | Nail-patella syndrome, 161200 |
| 602629 | Dystonia-6, torsion |
| 602631 | Rhabdomyosarcoma, 268210 |
| 602631 | Breast Cancer |
| 602669 | Anterior segment mesenchymal dysgenesis and cataract, 107250 |
| 602669 | Cataract, congenital |
| 602685 | Mental retardation, severe, with spasticity and tapetoretinal degeneration |
| 602716 | Nephrosis-1, congenital, Finnish type, 256300 |
| 602771 | Muscular dystrophy, congenital, with early spine rigidity |
| 602772 | Retinitis pigmentosa-24 |

Polynucleotide and Polypeptide Variants

[091] The present invention is also directed to variants of the immune/hematopoietic associated polynucleotide sequence disclosed in SEQ ID NO:X or the complementary strand thereto, nucleotide sequences encoding the polypeptide of SEQ ID NO:Y, the nucleotide sequence of SEQ ID NO:X encoding the polypeptide sequence as defined in column 6 of Table 1A, nucleotide sequences encoding the polypeptide as defined in column 6 of Table 1A, the nucleotide sequence as defined in columns 8 and 9 of Table 2, nucleotide sequences encoding the polypeptide encoded by the nucleotide sequence as defined in columns 8 and 9 of Table 2, the nucleotide sequence as defined in column 6 of Table 1B, nucleotide sequences encoding the polypeptide encoded by the nucleotide sequence as defined in column 6 of Table 1B, the cDNA sequence contained in Clone ID NO:Z, and/or nucleotide sequences encoding a polypeptide encoded by the cDNA sequence contained in Clone ID NO:Z.

[092] The present invention also encompasses variants of the polypeptide sequence disclosed in SEQ ID NO:Y, a polypeptide sequence as defined in column 6 of Table 1A, a polypeptide sequence encoded by the polynucleotide sequence in SEQ ID NO:X, a polypeptide sequence encoded by the nucleotide sequence as defined in columns 8 and 9 of Table 2, a polypeptide sequence encoded by the nucleotide sequence as defined in column 6 of Table 1B, a polypeptide sequence encoded by the complement of the polynucleotide sequence in SEQ ID NO:X, and/or a polypeptide sequence encoded by the cDNA sequence contained in Clone ID NO:Z.

[093] "Variant" refers to a polynucleotide or polypeptide differing from the polynucleotide or polypeptide of the present invention, but retaining essential properties thereof. Generally, variants are overall closely similar, and, in many regions, identical to the polynucleotide or polypeptide of the present invention.

[094] Thus, one aspect of the invention provides an isolated nucleic acid molecule comprising, or alternatively consisting of, a polynucleotide having a nucleotide sequence selected from the group consisting of: (a) a nucleotide sequence described in SEQ ID NO:X or contained in the cDNA sequence of Clone ID NO:Z; (b) a nucleotide sequence in SEQ ID NO:X or the cDNA in Clone ID NO:Z which encodes a mature immune/hematopoietic associated polypeptide; (c) a nucleotide sequence in SEQ ID NO:X or the cDNA sequence of Clone ID NO:Z, which encodes a biologically active

fragment of an immune/hematopoietic associated polypeptide; (d) a nucleotide sequence in SEQ ID NO:X or the cDNA sequence of Clone ID NO:Z, which encodes an antigenic fragment of an immune/hematopoietic associated polypeptide; (e) a nucleotide sequence encoding an immune/hematopoietic associated polypeptide having the complete amino acid sequence of SEQ ID NO:Y or the complete amino acid sequence encoded by the cDNA in Clone ID NO:Z; (f) a nucleotide sequence encoding a mature immune/hematopoietic associated polypeptide of the amino acid sequence of SEQ ID NO:Y or the amino acid sequence encoded by the cDNA in Clone ID NO:Z; (g) a nucleotide sequence encoding a biologically active fragment of an immune/hematopoietic associated polypeptide having the complete amino acid sequence of SEQ ID NO:Y or the complete amino acid sequence encoded by the cDNA in Clone ID NO:Z; (h) a nucleotide sequence encoding an antigenic fragment of an immune/hematopoietic associated polypeptide having the complete amino acid sequence of SEQ ID NO:Y or the complete amino acid sequence encoded by the cDNA in Clone ID NO:Z; and (i) a nucleotide sequence complementary to any of the nucleotide sequences in (a), (b), (c), (d), (e), (f), (g), or (h), above.

[095] The present invention is also directed to nucleic acid molecules which comprise, or alternatively consist of, a nucleotide sequence which is at least 80%, 85%, 90%, 95%, 96%, 97%, 98%, 99% or 100%, identical to, for example, any of the nucleotide sequences in (a), (b), (c), (d), (e), (f), (g), (h), or (i) above, the nucleotide coding sequence in SEQ ID NO:X or the complementary strand thereto, the nucleotide coding sequence of the cDNA contained in Clone ID NO:Z or the complementary strand thereto, a nucleotide sequence encoding the polypeptide of SEQ ID NO:Y, a nucleotide sequence encoding a polypeptide sequence encoded by the nucleotide sequence in SEQ ID NO:X, a polypeptide sequence encoded by the complement of the polynucleotide sequence in SEQ ID NO:X, a nucleotide sequence encoding the polypeptide encoded by the cDNA contained in Clone ID NO:Z, the nucleotide coding sequence in SEQ ID NO:X as defined in columns 8 and 9 of Table 2 or the complementary strand thereto, a nucleotide sequence encoding the polypeptide encoded by the nucleotide sequence in SEQ ID NO:X as defined in columns 8 and 9 of Table 2 or the complementary strand thereto, the nucleotide coding sequence in SEQ ID NO:B as defined in column 6 of Table 1B or the complementary strand thereto, a nucleotide sequence encoding the polypeptide encoded by the nucleotide sequence in SEQ

ID NO:B as defined in column 6 of Table 1B or the complementary strand thereto, the nucleotide sequence in SEQ ID NO:X encoding the polypeptide sequence as defined in column 6 of Table 1A or the complementary strand thereto, nucleotide sequences encoding a polypeptide as defined in column 6 of Table 1A or the complementary strand thereto, and/or polynucleotide fragments of any of these nucleic acid molecules (e.g., those fragments described herein). Polynucleotides which hybridize to the complement of these nucleic acid molecules under stringent hybridization conditions or alternatively, under lower stringency conditions, are also encompassed by the invention, as are polypeptides encoded by these polynucleotides and nucleic acids.

[096] In a preferred embodiment, the invention encompasses nucleic acid molecules which comprise, or alternatively, consist of a polynucleotide which hybridizes under stringent hybridization conditions, or alternatively, under lower stringency conditions, to a polynucleotide in (a), (b), (c), (d), (e), (f), (g), (h), or (i) above, as are polypeptides encoded by these polynucleotides. In another preferred embodiment, polynucleotides which hybridize to the complement of these nucleic acid molecules under stringent hybridization conditions or alternatively, under lower stringency conditions, are also encompassed by the invention, as are polypeptides encoded by these polynucleotides.

[097] In another embodiment, the invention provides a purified protein comprising, or alternatively consisting of, a polypeptide having an amino acid sequence selected from the group consisting of: (a) the complete amino acid sequence of SEQ ID NO:Y or the complete amino acid sequence encoded by the cDNA in Clone ID NO:Z; (b) the amino acid sequence of a mature immune/hematopoietic associated polypeptide having the amino acid sequence of SEQ ID NO:Y or the amino acid sequence encoded by the cDNA in Clone ID NO:Z; (c) the amino acid sequence of a biologically active fragment of an immune/hematopoietic associated polypeptide having the complete amino acid sequence of SEQ ID NO:Y or the complete amino acid sequence encoded by the cDNA in Clone ID NO:Z; and (d) the amino acid sequence of an antigenic fragment of an immune/hematopoietic associated polypeptide having the complete amino acid sequence of SEQ ID NO:Y or the complete amino acid sequence encoded by the cDNA in Clone ID NO:Z.

[098] The present invention is also directed to proteins which comprise, or alternatively consist of, an amino acid sequence which is at least 80%, 85%, 90%, 95%,

96%, 97%, 98%, 99% or 100%, identical to, for example, any of the amino acid sequences in (a), (b), (c), or (d), above, the amino acid sequence shown in SEQ ID NO:Y, the amino acid sequence encoded by the cDNA contained in Clone ID NO:Z, the amino acid sequence of the polypeptide encoded by the nucleotide sequence in SEQ ID NO:X as defined in columns 8 and 9 of Table 2, the amino acid sequence of the polypeptide encoded by the nucleotide sequence in SEQ ID NO:B as defined in column 6 of Table 1B, the amino acid sequence as defined in column 6 of Table 1A, an amino acid sequence encoded by the nucleotide sequence in SEQ ID NO:X, and an amino acid sequence encoded by the complement of the polynucleotide sequence in SEQ ID NO:X. Fragments of these polypeptides are also provided (e.g., those fragments described herein). Further proteins encoded by polynucleotides which hybridize to the complement of the nucleic acid molecules encoding these amino acid sequences under stringent hybridization conditions or alternatively, under lower stringency conditions, are also encompassed by the invention, as are the polynucleotides encoding these proteins.

[099] By a nucleic acid having a nucleotide sequence at least, for example, 95% "identical" to a reference nucleotide sequence of the present invention, it is intended that the nucleotide sequence of the nucleic acid is identical to the reference sequence except that the nucleotide sequence may include up to five point mutations per each 100 nucleotides of the reference nucleotide sequence encoding the polypeptide. In other words, to obtain a nucleic acid having a nucleotide sequence at least 95% identical to a reference nucleotide sequence, up to 5% of the nucleotides in the reference sequence may be deleted or substituted with another nucleotide, or a number of nucleotides up to 5% of the total nucleotides in the reference sequence may be inserted into the reference sequence. The query sequence may be an entire sequence referred to in Table 1A or 2 as the ORF (open reading frame), or any fragment specified, as described herein.

[0100] As a practical matter, whether any particular nucleic acid molecule or polypeptide is at least 80%, 85%, 90%, 95%, 96%, 97%, 98% or 99% identical to a nucleotide sequence of the present invention can be determined conventionally using known computer programs. A preferred method for determining the best overall match between a query sequence (a sequence of the present invention) and a subject sequence, also referred to as a global sequence alignment, can be determined using the FASTDB computer program based on the algorithm of Brutlag et al. (Comp. App. Biosci. 6:237-245

(1990)). In a sequence alignment the query and subject sequences are both DNA sequences. An RNA sequence can be compared by converting U's to T's. The result of said global sequence alignment is expressed as percent identity. Preferred parameters used in a FASTDB alignment of DNA sequences to calculate percent identity are: Matrix=Unitary, k-tuple=4, Mismatch Penalty=1, Joining Penalty=30, Randomization Group Length=0, Cutoff Score=1, Gap Penalty=5, Gap Size Penalty 0.05, Window Size=500 or the length of the subject nucleotide sequence, whichever is shorter.

[0101] If the subject sequence is shorter than the query sequence because of 5' or 3' deletions, not because of internal deletions, a manual correction must be made to the results. This is because the FASTDB program does not account for 5' and 3' truncations of the subject sequence when calculating percent identity. For subject sequences truncated at the 5' or 3' ends, relative to the query sequence, the percent identity is corrected by calculating the number of bases of the query sequence that are 5' and 3' of the subject sequence, which are not matched/aligned, as a percent of the total bases of the query sequence. Whether a nucleotide is matched/aligned is determined by results of the FASTDB sequence alignment. This percentage is then subtracted from the percent identity, calculated by the above FASTDB program using the specified parameters, to arrive at a final percent identity score. This corrected score is what is used for the purposes of the present invention. Only bases outside the 5' and 3' bases of the subject sequence, as displayed by the FASTDB alignment, which are not matched/aligned with the query sequence, are calculated for the purposes of manually adjusting the percent identity score.

[0102] For example, a 90 base subject sequence is aligned to a 100 base query sequence to determine percent identity. The deletions occur at the 5' end of the subject sequence and therefore, the FASTDB alignment does not show a matched/alignment of the first 10 bases at 5' end. The 10 unpaired bases represent 10% of the sequence (number of bases at the 5' and 3' ends not matched/total number of bases in the query sequence) so 10% is subtracted from the percent identity score calculated by the FASTDB program. If the remaining 90 bases were perfectly matched the final percent identity would be 90%. In another example, a 90 base subject sequence is compared with a 100 base query sequence. This time the deletions are internal deletions so that there are no bases on the 5' or 3' of the subject sequence which are not matched/aligned with the query. In this case

the percent identity calculated by FASTDB is not manually corrected. Once again, only bases 5' and 3' of the subject sequence which are not matched/aligned with the query sequence are manually corrected for. No other manual corrections are to be made for the purposes of the present invention.

[0103] By a polypeptide having an amino acid sequence at least, for example, 95% "identical" to a query amino acid sequence of the present invention, it is intended that the amino acid sequence of the subject polypeptide is identical to the query sequence except that the subject polypeptide sequence may include up to five amino acid alterations per each 100 amino acids of the query amino acid sequence. In other words, to obtain a polypeptide having an amino acid sequence at least 95% identical to a query amino acid sequence, up to 5% of the amino acid residues in the subject sequence may be inserted, deleted, (indels) or substituted with another amino acid. These alterations of the reference sequence may occur at the amino or carboxy terminal positions of the reference amino acid sequence or anywhere between those terminal positions, interspersed either individually among residues in the reference sequence or in one or more contiguous groups within the reference sequence.

[0104] As a practical matter, whether any particular polypeptide is at least 80%, 85%, 90%, 95%, 96%, 97%, 98% or 99% identical to, for instance, the amino acid sequence of a polypeptide referred to in Table 1A (e.g., an amino acid sequence identified in columns 5 or 6) or Table 2 (e.g., the amino acid sequence of the polypeptide encoded by the polynucleotide sequence defined in columns 8 and 9 of Table 2) or a fragment thereof, the amino acid sequence of the polypeptide encoded by the polynucleotide sequence in SEQ ID NO:B as defined in column 6 of Table 1B or a fragment thereof, the amino acid sequence of the polypeptide encoded by the nucleotide sequence in SEQ ID NO:X or a fragment thereof, or an amino acid sequence of the polypeptide encoded by cDNA contained in Clone ID NO:Z, or a fragment thereof, can be determined conventionally using known computer programs. A preferred method for determining the best overall match between a query sequence (a sequence of the present invention) and a subject sequence, also referred to as a global sequence alignment, can be determined using the FASTDB computer program based on the algorithm of Brutlag et al. (Comp. App. Biosci. 6:237-245 (1990)). In a sequence alignment the query and subject sequences are either both nucleotide sequences or both amino acid sequences. The result of said global

sequence alignment is expressed as percent identity. Preferred parameters used in a FASTDB amino acid alignment are: Matrix=PAM 0, k-tuple=2, Mismatch Penalty=1, Joining Penalty=20, Randomization Group Length=0, Cutoff Score=1, Window Size=sequence length, Gap Penalty=5, Gap Size Penalty=0.05, Window Size=500 or the length of the subject amino acid sequence, whichever is shorter.

[0105] If the subject sequence is shorter than the query sequence due to N- or C-terminal deletions, not because of internal deletions, a manual correction must be made to the results. This is because the FASTDB program does not account for N- and C-terminal truncations of the subject sequence when calculating global percent identity. For subject sequences truncated at the N- and C-termini, relative to the query sequence, the percent identity is corrected by calculating the number of residues of the query sequence that are N- and C-terminal of the subject sequence, which are not matched/aligned with a corresponding subject residue, as a percent of the total bases of the query sequence. Whether a residue is matched/aligned is determined by results of the FASTDB sequence alignment. This percentage is then subtracted from the percent identity, calculated by the above FASTDB program using the specified parameters, to arrive at a final percent identity score. This final percent identity score is what is used for the purposes of the present invention. Only residues to the N- and C-termini of the subject sequence, which are not matched/aligned with the query sequence, are considered for the purposes of manually adjusting the percent identity score. That is, only query residue positions outside the farthest N- and C-terminal residues of the subject sequence.

[0106] For example, a 90 amino acid residue subject sequence is aligned with a 100 residue query sequence to determine percent identity. The deletion occurs at the N-terminus of the subject sequence and therefore, the FASTDB alignment does not show a matching/alignment of the first 10 residues at the N-terminus. The 10 unpaired residues represent 10% of the sequence (number of residues at the N- and C- termini not matched/total number of residues in the query sequence) so 10% is subtracted from the percent identity score calculated by the FASTDB program. If the remaining 90 residues were perfectly matched the final percent identity would be 90%. In another example, a 90 residue subject sequence is compared with a 100 residue query sequence. This time the deletions are internal deletions so there are no residues at the N- or C-termini of the subject sequence which are not matched/aligned with the query. In this case the percent

identity calculated by FASTDB is not manually corrected. Once again, only residue positions outside the N- and C-terminal ends of the subject sequence, as displayed in the FASTDB alignment, which are not matched/aligned with the query sequence are manually corrected for. No other manual corrections are to be made for the purposes of the present invention.

[0107] The polynucleotide variants of the invention may contain alterations in the coding regions, non-coding regions, or both. Especially preferred are polynucleotide variants containing alterations which produce silent substitutions, additions, or deletions, but do not alter the properties or activities of the encoded polypeptide. Nucleotide variants produced by silent substitutions due to the degeneracy of the genetic code are preferred. Moreover, polypeptide variants in which less than 50, less than 40, less than 30, less than 20, less than 10, or 5-50, 5-25, 5-10, 1-5, or 1-2 amino acids are substituted, deleted, or added in any combination are also preferred. Polynucleotide variants can be produced for a variety of reasons, e.g., to optimize codon expression for a particular host (change codons in the human mRNA to those preferred by a bacterial host such as *E. coli*).

[0108] Naturally occurring variants are called "allelic variants," and refer to one of several alternate forms of a gene occupying a given locus on a chromosome of an organism. (Genes II, Lewin, B., ed., John Wiley & Sons, New York (1985).) These allelic variants can vary at either the polynucleotide and/or polypeptide level and are included in the present invention. Alternatively, non-naturally occurring variants may be produced by mutagenesis techniques or by direct synthesis.

[0109] Using known methods of protein engineering and recombinant DNA technology, variants may be generated to improve or alter the characteristics of the polypeptides of the present invention. For instance, one or more amino acids can be deleted from the N-terminus or C-terminus of the polypeptides of the present invention without substantial loss of biological function. As an example, the authors of Ron et al., J. Biol. Chem. 268: 2984-2988 (1993), reported variant KGF proteins having heparin binding activity even after deleting 3, 8, or 27 amino-terminal amino acid residues. Similarly, Interferon gamma exhibited up to ten times higher activity after deleting 8-10 amino acid residues from the carboxy terminus of this protein. (Dobeli et al., J. Biotechnology 7:199-216 (1988).)

[0110] Moreover, ample evidence demonstrates that variants often retain a biological activity similar to that of the naturally occurring protein. For example, Gayle and coworkers (J. Biol. Chem. 268:22105-22111 (1993)) conducted extensive mutational analysis of human cytokine IL-1a. They used random mutagenesis to generate over 3,500 individual IL-1a mutants that averaged 2.5 amino acid changes per variant over the entire length of the molecule. Multiple mutations were examined at every possible amino acid position. The investigators found that "[m]ost of the molecule could be altered with little effect on either [binding or biological activity]." In fact, only 23 unique amino acid sequences, out of more than 3,500 nucleotide sequences examined, produced a protein that significantly differed in activity from wild-type.

[0111] Furthermore, even if deleting one or more amino acids from the N-terminus or C-terminus of a polypeptide results in modification or loss of one or more biological functions, other biological activities may still be retained. For example, the ability of a deletion variant to induce and/or to bind antibodies which recognize the secreted form will likely be retained when less than the majority of the residues of the secreted form are removed from the N-terminus or C-terminus. Whether a particular polypeptide lacking N- or C-terminal residues of a protein retains such immunogenic activities can readily be determined by routine methods described herein and otherwise known in the art.

[0112] Thus, the invention further includes polypeptide variants which show a functional activity (e.g., biological activity) of the polypeptides of the invention. Such variants include deletions, insertions, inversions, repeats, and substitutions selected according to general rules known in the art so as have little effect on activity.

[0113] The present application is directed to nucleic acid molecules at least 80%, 85%, 90%, 95%, 96%, 97%, 98%, 99% or 100% identical to the nucleic acid sequences disclosed herein, (e.g., encoding a polypeptide having the amino acid sequence of an N and/or C terminal deletion), irrespective of whether they encode a polypeptide having functional activity. This is because even where a particular nucleic acid molecule does not encode a polypeptide having functional activity, one of skill in the art would still know how to use the nucleic acid molecule, for instance, as a hybridization probe or a polymerase chain reaction (PCR) primer. Uses of the nucleic acid molecules of the present invention that do not encode a polypeptide having functional activity include, *inter alia*, (1) isolating a gene or allelic or splice variants thereof in a cDNA library; (2) in situ

hybridization (e.g., "FISH") to metaphase chromosomal spreads to provide precise chromosomal location of the gene, as described in Verma et al., Human Chromosomes: A Manual of Basic Techniques, Pergamon Press, New York (1988); (3) Northern Blot analysis for detecting mRNA expression in specific tissues (e.g., normal immune/hematopoietic or diseased immune/hematopoietic tissues); and (4) *in situ* hybridization (e.g., histochemistry) for detecting mRNA expression in specific tissues (e.g., normal immune/hematopoietic or diseased immune/hematopoietic tissues).

[0114] Preferred, however, are nucleic acid molecules having sequences at least 80%, 85%, 90%, 95%, 96%, 97%, 98%, 99% or 100% identical to the nucleic acid sequences disclosed herein, which do, in fact, encode a polypeptide having functional activity. By a polypeptide having "functional activity" is meant, a polypeptide capable of displaying one or more known functional activities associated with a full-length (complete) protein of the invention. Such functional activities include, but are not limited to, biological activity, antigenicity [ability to bind (or compete with a polypeptide of the invention for binding) to an anti-polypeptide of the invention antibody], immunogenicity (ability to generate antibody which binds to a specific polypeptide of the invention), ability to form multimers with polypeptides of the invention, and ability to bind to a receptor or ligand for a polypeptide of the invention.

[0115] The functional activity of the polypeptides, and fragments, variants and derivatives of the invention, can be assayed by various methods.

[0116] For example, in one embodiment where one is assaying for the ability to bind or compete with full-length polypeptide of the present invention for binding to an anti-polypeptide of the invention antibody, various immunoassays known in the art can be used, including but not limited to, competitive and non-competitive assay systems using techniques such as radioimmunoassays, ELISA (enzyme linked immunosorbent assay), "sandwich" immunoassays, immunoradiometric assays, gel diffusion precipitation reactions, immunodiffusion assays, *in situ* immunoassays (using colloidal gold, enzyme or radioisotope labels, for example), western blots, precipitation reactions, agglutination assays (e.g., gel agglutination assays, hemagglutination assays), complement fixation assays, immunofluorescence assays, protein A assays, and immunoelectrophoresis assays, etc. In one embodiment, antibody binding is detected by detecting a label on the primary antibody. In another embodiment, the primary antibody is detected by detecting binding

of a secondary antibody or reagent to the primary antibody. In a further embodiment, the secondary antibody is labeled. Many means are known in the art for detecting binding in an immunoassay and are within the scope of the present invention.

[0117] In another embodiment, where a ligand is identified, or the ability of a polypeptide fragment, variant or derivative of the invention to multimerize is being evaluated, binding can be assayed, e.g., by means well-known in the art, such as, for example, reducing and non-reducing gel chromatography, protein affinity chromatography, and affinity blotting. See generally, Phizicky et al., *Microbiol. Rev.* 59:94-123 (1995). In another embodiment, the ability of physiological correlates of a polypeptide of the present invention to bind to a substrate(s) of the polypeptide of the invention can be routinely assayed using techniques known in the art.

[0118] In addition, assays described herein (see Examples) and otherwise known in the art may routinely be applied to measure the ability of polypeptides of the present invention and fragments, variants and derivatives thereof to elicit polypeptide related biological activity (either *in vitro* or *in vivo*). Other methods will be known to the skilled artisan and are within the scope of the invention.

[0119] Of course, due to the degeneracy of the genetic code, one of ordinary skill in the art will immediately recognize that a large number of the nucleic acid molecules having a sequence at least 80%, 85%, 90%, 95%, 96%, 97%, 98%, 99%, or 100% identical to, for example, the nucleic acid sequence of the cDNA contained in Clone ID NO:Z, a nucleic acid sequence referred to in Table 1A (e.g., SEQ ID NO:X), a nucleic acid sequence disclosed in Table 2 (e.g., the nucleic acid sequence delineated in columns 8 and 9) or fragments thereof, will encode polypeptides "having functional activity." In fact, since degenerate variants of any of these nucleotide sequences all encode the same polypeptide, in many instances, this will be clear to the skilled artisan even without performing the above described comparison assay. It will be further recognized in the art that, for such nucleic acid molecules that are not degenerate variants, a reasonable number will also encode a polypeptide having functional activity. This is because the skilled artisan is fully aware of amino acid substitutions that are either less likely or not likely to significantly effect protein function (e.g., replacing one aliphatic amino acid with a second aliphatic amino acid), as further described below.

[0120] For example, guidance concerning how to make phenotypically silent amino acid substitutions is provided in Bowie et al., "Deciphering the Message in Protein Sequences: Tolerance to Amino Acid Substitutions," *Science* 247:1306-1310 (1990), wherein the authors indicate that there are two main strategies for studying the tolerance of an amino acid sequence to change.

[0121] The first strategy exploits the tolerance of amino acid substitutions by natural selection during the process of evolution. By comparing amino acid sequences in different species, conserved amino acids can be identified. These conserved amino acids are likely important for protein function. In contrast, the amino acid positions where substitutions have been tolerated by natural selection indicates that these positions are not critical for protein function. Thus, positions tolerating amino acid substitution could be modified while still maintaining biological activity of the protein.

[0122] The second strategy uses genetic engineering to introduce amino acid changes at specific positions of a cloned gene to identify regions critical for protein function. For example, site directed mutagenesis or alanine-scanning mutagenesis (introduction of single alanine mutations at every residue in the molecule) can be used. See Cunningham et al., *Science* 244:1081-1085 (1989). The resulting mutant molecules can then be tested for biological activity.

[0123] As the authors state, these two strategies have revealed that proteins are surprisingly tolerant of amino acid substitutions. The authors further indicate which amino acid changes are likely to be permissive at certain amino acid positions in the protein. For example, most buried (within the tertiary structure of the protein) amino acid residues require nonpolar side chains, whereas few features of surface side chains are generally conserved. Moreover, tolerated conservative amino acid substitutions involve replacement of the aliphatic or hydrophobic amino acids Ala, Val, Leu and Ile; replacement of the hydroxyl residues Ser and Thr; replacement of the acidic residues Asp and Glu; replacement of the amide residues Asn and Gln, replacement of the basic residues Lys, Arg, and His; replacement of the aromatic residues Phe, Tyr, and Trp, and replacement of the small-sized amino acids Ala, Ser, Thr, Met, and Gly. Besides conservative amino acid substitutions, variants of the present invention include (i) substitutions with one or more of the non-conserved amino acid residues, where the substituted amino acid residues may or may not be one encoded by the genetic code, or (ii)

substitutions with one or more of the amino acid residues having a substituent group, or (iii) fusion of the mature polypeptide with another compound, such as a compound to increase the stability and/or solubility of the polypeptide (for example, polyethylene glycol), or (iv) fusion of the polypeptide with additional amino acids, such as, for example, an IgG Fc fusion region peptide, serum albumin (preferably human serum albumin) or a fragment or variant thereof, or leader or secretory sequence, or a sequence facilitating purification. Such variant polypeptides are deemed to be within the scope of those skilled in the art from the teachings herein.

[0124] For example, polypeptide variants containing amino acid substitutions of charged amino acids with other charged or neutral amino acids may produce proteins with improved characteristics, such as less aggregation. Aggregation of pharmaceutical formulations both reduces activity and increases clearance due to the aggregate's immunogenic activity. See Pinckard et al., Clin. Exp. Immunol. 2:331-340 (1967); Robbins et al., Diabetes 36: 838-845 (1987); Cleland et al., Crit. Rev. Therapeutic Drug Carrier Systems 10:307-377 (1993).

[0125] A further embodiment of the invention relates to polypeptides which comprise the amino acid sequence of a polypeptide having an amino acid sequence which contains at least one amino acid substitution, but not more than 50 amino acid substitutions, even more preferably, not more than 40 amino acid substitutions, still more preferably, not more than 30 amino acid substitutions, and still even more preferably, not more than 20 amino acid substitutions from a polypeptide sequence disclosed herein. Of course it is highly preferable for a polypeptide to have an amino acid sequence which comprises the amino acid sequence of a polypeptide of SEQ ID NO:Y, an amino acid sequence encoded by SEQ ID NO:X, an amino acid sequence encoded by the portion of SEQ ID NO:X as defined in columns 8 and 9 of Table 2, an amino acid sequence encoded by the complement of SEQ ID NO:X, and/or the amino acid sequence encoded by cDNA contained in Clone ID NO:Z which contains, in order of ever-increasing preference, at least one, but not more than 10, 9, 8, 7, 6, 5, 4, 3, 2 or 1 amino acid substitutions.

[0126] In specific embodiments, the polypeptides of the invention comprise, or alternatively, consist of, fragments or variants of a reference amino acid sequence selected from: (a) the amino acid sequence of SEQ ID NO:Y or fragments thereof (e.g., the mature form and/or other fragments described herein); (b) the amino acid sequence encoded by